THE MEDICAL JOURNAL OF AUSTRALIA

VOL. I.—23RD YEAR. SYDNEY, SATURDAY, APRIL 11, 1936. No. 15.

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THE PSYCHOLOGICAL ASPECT OF GENERAL MEDICAL PRACTICE.[1]

By S. O. COWEN, M.D. (Melbourne),
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ALL of us who are engaged in private practice have had perforce to evolve some method of dealing with patients suffering from illnesses of psychogenic origin, and those who, like myself, have had no training in psychology or psychiatry have done so almost instinctively. Any deliberate and conscious attempt to define our attitude towards these cases is beset with many difficulties. The greatest difficulty is raised by those to whom we might reasonably turn for help: the psychologists and, especially, the psychoanalysts. They have indeed frightened most of us away by their dogmatism and by their premature assumption that the speculations and hypotheses of their own particular school constitute an exact and somewhat esoteric science; and so essential are the differences between rival theories that the ordinary man is confused and feels himself incapable of deciding where lies the truth.

Further, the psychoanalysts have given plain English words meanings which they were never meant to express, and so have raised a barrier which few of us attempt to pass. But even if psychology were wholly intelligible, the fundamental difficulty would remain: that the attitude of every practitioner towards the neuroses must of necessity be personal and individual and that the psychology of the physician determines his outlook on the mental processes of his patient. Although each one of us must therefore work out his own salvation, it is in the hope that my own solution of the problem, partial and ineffective though it

[1] Read at a meeting of the Victorian Branch of the British Medical Association on March 4, 1936.

often proves in practice, may be of help to others in like difficulties that I venture to address you. As the subject can be profitably discussed only from the standpoint of personal experience, I feel that no apology is necessary for my adoption of this method of approach.

In my student days we received no formal instruction in psychological medicine other than a few lecture-demonstrations in insanity. Further, we learned, chiefly in the out-patient clinics, that there existed a peculiar mental state known as hysteria. Quite often a great commotion would arise amongst the rows of patients awaiting treatment, and a young girl in an apparently unconscious state, exhibiting peculiar irregular movements of the head and limbs, would be half dragged, half carried into the consulting room. The physician in charge would forthwith slap her face, telling her in sharp tones to behave, whereupon she would be laid upon a couch and left to work out her own salvation. We students gathered that hysteria was a grave reproach to the patient, and a matter almost entirely beneath the notice of the physician. It was also borne in on us in a rather indirect way that, apart from the truly hysterical patients, a certain number of others, who made complaints which had no detectable organic basis, were to be regarded as malingerers or, in the prevailing hospital slang, "lizards". These, it seemed, were an abomination to all physicians and could be disregarded as long as we did not commit the unpardonable offence of overlooking an organic cause for any or all of their complaints. It may be thought that these are exaggerated statements, but my contemporaries and seniors will recognize in them a true account of undergraduate experience in the not distant past.

After a hospital residentship with, quite rightly, its emphasis upon organic diseases, came service during the Great War. Here it was obvious that many men broke down and fell ill as a result of mental stress. But the conditions of service were so alien to those of civilian life that the effects they produced seemed to have little bearing on the problems of ordinary medical work.

Such was the training, or, rather, lack of training, in psychological medicine with which I embarked upon private practice, and within a few months it became apparent that I was going to be forced to recognize and somehow to deal with many illnesses of psychogenic origin. Here are brief accounts of two cases encountered in my first year in practice. Neither of them presents any obscure problem, but, owing to my utter inexperience of psychological medicine, their management tried me sorely.

Eva B., aged thirty-one years, married, complained that for the previous nine months she had experienced a series of nervous symptoms. She was mentally and physically tired and could not think properly because her head felt empty. She was restless and irritable by day and slept poorly at night, in spite of taking alcohol in some form or other to induce sleep. Apart from tiredness she made no complaint of any physical disturbance; her appetite was fairly good and she had not lost more than a few pounds in weight. She had had a severe nervous breakdown nine years before. Questioning elicited some significant facts concerning her social environment. She came of industrious, conservative English artisan stock, and for ten years she had worked hard as a seamstress in her mother's business. At the age of twenty-five she became engaged to a young man of whom her parents warmly approved, but two years later her fiancé was killed in action. After a year of intense sorrow and emotional disturbance she married, more or less in haste, a middle-aged man of whom she knew very little. Though a kindly enough husband, he proved to be a radical in politics and an enthusiastic worker in the communist cause. His ideas were most distasteful to the parents, and she herself had little sympathy with them. Six months after her marriage she developed the symptoms complained of on her visit to me. They were to some extent relieved by a holiday away from her husband, in her father's house, but each time she attempted to return to her own home they recurred with greater intensity. As no abnormal physical signs could be detected, it was considered that emotional conflict offered a complete explanation of the nervous disturbances. At several subsequent visits attempts at explanation and evaluation of symptoms were made, but they were entirely unsuccessful.

Bertha H., aged twenty-two years, unmarried, complained of vague abdominal symptoms, none of which suggested organic disease. She was, she said, too easily tired, but inquiry revealed that she was doing far too much, studying music, playing tennis almost daily, and dancing three or four times a week. Examination revealed gross visceroptosis, but no signs of organic disease were detected. A diagnosis of exhaustion neurosis was adopted. My platitudinous and somewhat clumsy attempts at reassurance were, however, provocative of a storm of tears. The patient explained that as I was the fifth doctor she had consulted, and that as not one of us had given her a satisfactory explanation of her symptoms, she was convinced she had cancer. Although the then current teaching was that the existence of visceroptosis must be concealed from the patient lest a neurosis should be provoked, I cast discretion to the winds and embarked on an explanation of the condition. The result was very happy in that the patient at once consented to order her life more reasonably and promptly lost her symptoms. She has remained well ever since.

As time went on the psychogenic cases began to bulk so largely among my patients that I distrusted my own judgement and commenced to wonder if I had not become obsessed with them. But conversations with sound general practitioners whom I met in consultation indicated that they too often encountered so-called functional disorders. Confirmation came also from more authoritative sources. Ryle,[1] now Regius Professor at Cambridge, in a paper published in 1923, stated that of 267 patients referred to him for opinion as to the nature of their gastro-intestinal symptoms, 24% had to be classed as suffering from purely functional disorders. More recently, Friedenwald and Morrison[2] have found that 45% of a similar series had to be relegated to the same category. Again, in 1934, Cassidy[3] stated that of 843 patients referred to him for opinion as to the nature of their cardiac disorders, 29·5% were classified as neuropathic. That this is no new thing is exemplified by Broadbent's[4] statement, made as long ago as 1906, that functional disturbances of the heart give rise to much actual suffering and to far more nervous apprehension and fear of death than definite valvular and structural disease combined.

With confirmation such as this I could no longer mistrust my own experience, and I felt I had to work out for myself some definite plan for the

management of psychogenic disorders. I therefore proceeded to read the authorities. I found Adler and Jung rather impracticable. Freud offered most help, but his views were often difficult to accept. Primarily I baulked at his assumption of scientific exactitude; the personal element seemed to be too great to permit of the establishment of objective truths patent to all observers. Nor could I, like many others, stomach Freud's exaltation of the sexual impulse as the dominant causal factor in all neuroses. And finally I found his methods of treatment impossible for anyone who, like myself, was quite untrained in his technique and method of approach. Nevertheless it is Freud, as I hope to show later, who offers the greatest practical help in dealing with the neuropath. But, at the time, my reading left me much disheartened and it was really my friend, Dr. H. F. Maudsley, a trained psychiatrist, who in many discussions helped me to thrash out the problem and arrive at some sort of practical conclusion. Later my attitude was clarified and confirmed by reading T. H. Ross's "The Common Neuroses". Those of you who have read this excellent book will recognize much of its teaching in this address.

In the discussion which follows I have, with one important exception, adopted the Freudian terminology. I cannot, however, accept Freud's definition of neurasthenia as a purely sexual neurosis resulting from mental conflict caused by excessive masturbation. I regard the term, which should be restricted to its etymological meaning, as synonymous with exhaustion neurosis.

The Ætiology of the Neuroses.

Of prime importance in the causation of the neuroses and psychoses is the defect, inborn or acquired, which predisposes an individual to react unfavourably to emotional stress. This inherent instability has been given many names, of which the neuropathic constitution is the one most often used. It is revealed in practice in two ways: by a history of psychogenic disorders in other members of the patient's immediate family and by the previous occurrence of "nervous breakdown" in the patient's own past. There is such general agreement about the reality and importance of a nervous diathesis of this sort that its ætiological significance need not be further elaborated.

The exciting causes of the neuroses are often difficult to identify, because, as Ross points out: "There is no such thing as a cause of a nervous illness; there are a number of conditions which favour its growth and development." It is, of course, manifestly impossible in a paper such as this to enumerate all the causal factors which may be encountered; the more important only can be briefly mentioned. Roughly speaking, they fall under three headings: mental, social, and emotional factors.

Mental Factors.

Compulsory primary education, however desirable it may be on general grounds, has undoubtedly contributed to the increase in the incidence of psychogenic disorders. It exposes to intellectual stresses, arising from competition, and especially from competitive examinations, many individuals who are not possessed of sufficient mental stamina to withstand them. Free university places and the opportunities of modern business facilitate the advancement to executive positions of men and women endowed with acuteness and sharpness of mind, but lacking the background of breeding and character necessary to cope with responsibility. Even more important as a cause of the neuroses is the lack of rest which our noisy, busy, hurrying social order entails. Another factor, and one for which our profession is partly responsible, is the education of the lay public in medical matters. As a result of newspaper propaganda and broadcast health talks the layman is becoming more and more preoccupied with his internal organs and their workings. The fear of cancer, too, has been so fostered by publicity as to be an important source of anxiety and stress.

Social Factors.

We are obviously much less inclined than were our grandfathers to remain in that state of life into which we have been called, and, laudable as ambition of this sort may be, it exposes us to new anxieties and new conflicts. And when the urge for social betterment occasions emigration to a strange country, loneliness and nostalgia add to the stress and may precipitate a breakdown. The monotony of modern machine work is another important ætiological factor in the genesis of functional disturbances and one which is often enhanced by the adoption of mechanical rather than creative hobbies. Higher in the social scale, the middle-aged captain of industry, who has lost the capacity for relaxation and play, may fail to cope with the anxieties his business entails. But the social stresses fall most hardly on women. Amongst the reasonably well-to-do, the unmarried woman and the middle-aged mother of a small family often suffer grievously from lack of mental occupation; idleness breeds introspection, tea-table chatter about illnesses fosters anxiety and a neurosis is engendered.

Emotional Factors.

Emotional stresses, though they comprise by far the largest group of mental traumata, have been so widely canvassed in medical and lay literature that they need only brief discussion. Whether we extol or deplore the rapid growth of social freedom, we must admit that it exposes our young people to problems of conduct and to conflicts from which Victorian youth was to a large extent sheltered. In older people it has been forced in on me, rather unwillingly I must admit, that almost all the emotional stresses are frankly sexual in origin. The girl who wilts under the strain of a long engagement, the unstable young widow and the neurotic unmarried woman of thirty-five to forty years of age will occur to all of you as instances of the potency of this factor. In married women sexual incompatibility, lack of sexual satisfaction and the fear of pregnancy are frequent causes of functional

disorders. In both sexes *coitus interruptus* is productive of great harm. Although space forbids further elaboration of these emotional stresses, their importance in the production of the neuroses cannot be too strongly emphasized.

The Elucidation of the Causal Factors.

For those of us who lack training in psychiatry the only safe method of elucidating the ætiology of a neurosis is by careful and sympathetic history-taking. The patient should first be allowed to detail his complaints in his own way, even though he may take an unconscionable time in doing so. His social and economic environment should next be investigated and his family history explored for evidences of hereditary neuropathic tendencies. Direct questioning about sexual matters is permissible, but psychoanalytic methods of inquiry, which are dangerous in unskilled hands, are fortunately seldom necessary.

The Mechanism of Production of Symptoms.

Emotional stresses produce their effects mainly through the anxiety engendered by mental insecurity and conflict. Fatigue cannot be ignored as an immediate cause of symptoms, but it is so frequently associated with anxiety that its significance is often difficult of assessment. When one or both of these factors act over a period of time on a neuropathic individual, the normal physical responses to emotional states may be prolonged and exaggerated. Ross aptly refers to this mechanism as "over-reaction". To take a simple example: the tachycardia and palpitation which assail the strongest of us in moments of great stress often appear without overt cause in the neurotic and persist for long periods. Physical symptoms thus engendered produce in the patient's mind an awareness, or even an actual consciousness, of their presence, by which their effects are often perpetuated. Thus arises the anxiety neurosis, the commonest of the psychogenic disorders and the most responsive to treatment.

In other patients, and they are fortunately in the minority, more profound mental and emotional disturbance may be manifested by evidences of loss of function, such as paralysis or anæsthesia. The mechanism by which negative symptoms of this kind are produced is spoken of by Ross as "under-reaction" and the resulting disorder as hysteria. In a third group of patients the unconscious mental difficulty may be simply ignored and compulsion neuroses and obsessions may develop. These latter, together with hysteria, comprise the psychoneuroses. Their recognition is important, because their treatment demands such special technique that they can be dealt with satisfactorily only by the trained psychiatrist.

Clinical Features of the Anxiety Neuroses.

One of the first points which will arouse the examiners' suspicion that he is dealing with an anxiety neurosis is the patient's attitude of mind to his illness. This is not easy to describe, but it may be recognized by an alert introspectiveness, by meticulousness in the description of symptoms, and by a rather irritating air of suffering patiently borne. The little scrap of paper, with its list of symptoms, is often in evidence, but its use is by no means confined to neurotics. The physician's attention may also be attracted to certain suggestive physical characteristics. The sufferer from an anxiety neurosis is often sallow and under-weight, his facial expression may betray his anxiety, and mottled blushing about the neck and chest sometimes indicates a tendency to vascular over-reaction.

Though the physical symptoms experienced by the patient may be referred to any organ or system, they can be roughly grouped under three headings: neurasthenic, digestive and circulatory.

Neurasthenic Symptoms.

The neurasthenic complains of tiredness, which is typically at its worst in the morning and lessens as the day goes on. He may rest poorly or, on the other hand, he may say that he sleeps too heavily and awakes unrefreshed. His work is a burden and he finds himself unable to concentrate. He suffers as a rule from vague aches and pains which, as an evidence of his over-reaction to stimuli of many kinds, he is apt to describe as agonizing. Of physical signs, apart from those of indeterminate character already mentioned, there are none directly attributable to the nervous disorder. The blood pressure may be above or below normal; it varies so much as to have no diagnostic significance.

Digestive Symptoms.

To the neurasthenic syndrome there may be added symptoms of dyspepsia. The peculiar characters of functional digestive disorders are adequately considered in the text-books and I do not intend to recapitulate them. There are, however, some important points which are worthy of mention. The factor of over-reaction is exemplified by many of the cases in this group. The abdominal discomforts due to excessive nervous activity (itself an over-reaction) are magnified by the patient's receptors into agonizing pains. The visceroptotic patient is of interest and importance in this group. I would state dogmatically that visceroptosis indicates a constitutional weakness with which a neuropathic tendency is often associated; the minor discomforts attendant on the visceral abnormality are therefore likely to induce an anxiety state. Whether this assumption is true or not, the results of treatment, in the milder cases, by explanation of the basis of the symptoms is often most satisfactory. These visceroptotics are patients to whom meddlesome and misguided surgery does incalculable harm. The following case, which could, I am sure, be duplicated in the experience of most of you, provides a sorry example.

F.B., aged forty-two years, a visceroptotic female, was never really robust, and at the age of twenty-three she sought medical advice for vague dyspepsia. Appendicectomy was promptly performed, but the symptoms were, perversely enough, much aggravated by the operation. Shortly afterwards a gynæcologist removed one ovary and

suspended the uterus from the abdominal wall. As no good resulted, another gynæcologist two years later removed the other ovary. After three more years a surgeon operated on her for a "Lane's kink". Her abdominal symptoms, however, persisted until a physician in another State persuaded her to adopt a child. Since she did so she has remained reasonably well.

Cardiac Symptoms.

The cardiac manifestations of the anxiety state are exemplified by the condition known variously as the effort syndrome, the soldier's heart or "D.A.H". Its chief symptoms are tachycardia and awareness of the heart's action or actual palpitation. The point need not be laboured that they are evidences of over-reaction and that they differ only in their intensity and their persistence from the normal response to anxiety and emotion. Even the fainting attacks which may also occur can similarly be ascribed to over-reaction. Occasionally such symptoms accompany and, so to speak, overlie, an organic cardiac lesion, but far more often they are of purely nervous origin.

Diagnosis.

While a neurosis often declares itself almost openly, its detection may at times be an extremely difficult matter. The range of psychogenic symptoms is so wide that their significance cannot be individually assessed. Some diagnostic principles of general application can, however, be formulated. It is essential in the first place that the examiner should always have in mind the possibility of the occurrence of a neurosis in any patient he has to deal with. Scarcely less important than this continual "awareness" is the quick recognition that the patient conforms to the type liable to the development of psychogenic disturbances. The third, and by far the most difficult point, is the exclusion of organic disease; even though the symptoms have persisted for years and abnormal signs are still not apparent, we can never be sure that we have not overlooked a physical lesion. We can, however, make our examination with care and thoroughness, employing such special investigations as may seem necessary and then, taking our courage in both hands, accept our negative findings at their face value. It has been urged that the use of X rays or laboratory tests tends to increase the neurotic's conviction that he must be the subject of grave organic disease. This I do not believe; if the purpose of the investigation is explained, no harmful results will follow. Confidence indeed will be bred by the feeling that no stone is being left unturned in the attempt to determine the true nature of the illness, and the way may thus be paved for successful treatment.

Differential Diagnosis.

In differential diagnosis again the exclusion of organic disease is of prime importance.

The differentiation of a neurosis from a psychosis does not as a rule present any great difficulty. Of great help is the rule that the neurotic is struggling with the real and very ordinary difficulties inherent in his environment, while the psychotic has fled from his troubles to a world of phantasy. But if doubt exists it is wise to enlist the aid of a psychiatrist before venturing on a diagnosis and undertaking treatment.

Treatment.

In discussing treatment it must again be insisted that the management of the neurotic is a personal matter; the method adopted must depend on the temperament and outlook of the physician as well as on the mentality of the patient. For instance, one physician may instinctively use brusque, almost bullying, methods of reassurance, while another will rely on gentler and more persuasive suggestion. Some patients will respond to the one method and some to the other, and no physician, however wise he may be, will find his own peculiar attitude and technique acceptable to all the neurotics he encounters. Despite these differences in practice, certain therapeutic principles of general validity may be stated.

Paradoxical as it may sound, one of the most important features of treatment is careful history-taking. The patient must be made to feel that the complaints which are to him so real and urgent are being accepted impartially and at their face value by a patient and sympathetic examiner. Thus will be laid a foundation of confidence which will facilitate the suggestive methods adopted later in treatment.

Not less important is the minutely complete and careful physical examination which will assure the patient that a thoroughly disinterested search is being made for the basis of his symptoms. Again, his confidence will be increased by the feeling that he is getting a "fair deal".

After thorough history-taking and examination an attempt is made to explain the patient's condition to him. In some instances this is easy; the dullest individual can usually be made to understand that the cardiac symptoms of an anxiety neurosis are due to over-reaction to stress and that they constitute an exaggeration and perpetuation of strictly normal phenomena. Sometimes, when the subjective symptoms are vague and intangible, explanation is much more difficult, and recourse must be had to simple assurance that the symptoms do not indicate organic disease. But whenever possible "evaluation of symptoms", to use Ross's graphic term, should be carefully carried out. It is indeed the essential feature of the treatment of the neuroses. In making this explanation no hedging is permissible; we cannot permit lingering doubts to render our reassurance unconvincing. No matter how acute our consciousness of the difficulty of excluding obscure organic disease, we must, in fairness to the patient, when we have decided that the basis of the symptoms is a neurosis, fling discretion to the winds. Especially is this so in dealing with cardiac neuroses. Much cardiac invalidism is to be laid to the charge of physicians who, because they fear the possibility of injuring their own reputations by overlooking an inconspicuous organic

lesion, fail to reassure the possessor of an innocuous bruit or the sufferer from the effort syndrome. I would go so far as to say that failure to reassure unreservedly a neurotic patient is just as culpable as overlooking a physical lesion, and is often productive of greater misery and suffering.

At the commencement of treatment rest is often advisable. Too often the neurotic is urged to "snap out of it" and to drive himself to participation in athletic and social activities for which he is entirely unfit. Worst of all, he may be dispatched on a holiday cruise, with its ceaseless round of organized entertainments. What he really requires is a period of mental and physical rest, during which he can commence the difficult process of readjustment. The degree of rest will range in cases of varying severity from complete isolation in bed to a quiet, loafing holiday in the hills or by the sea. But, whatever its necessary degree, rest will be most efficacious in fresh surroundings, which liberate the patient from the immediate pressure of his daily responsibilities.

It might be thought that insistence on the mental origin of the symptoms would interdict the use of drugs. But if it is carefully explained that medicinal treatment is only an adjuvant to rest and readjustment, sedatives are not only permissible, but are often of great value. In the same spirit removal of septic foci or other measures designed to improve the patient's general health may be undertaken.

Prognosis.

The prognosis varies with the severity and duration of the symptoms. In mild and early cases complete and lasting recovery is often attained. But cases in which the symptoms are of long standing and the environment difficult of modification may prove intractable. Even if cure is not always possible, much may be done for the alleviation of mental suffering, and unnecessary medical cures and meddlesome surgery may be avoided.

Conclusions.

In conclusion, certain deductions and points for discussion which emerge from a consideration of the psychological aspects of general medical practice may be dogmatically stated.

Illnesses of psychogenic origin form a considerable proportion of the cases encountered in general medical work. Many of them can be satisfactorily treated by the general practitioner, who must, however, have had some training in the handling of such cases and who must have formulated for himself a definite plan of treatment. To this end formal undergraduate teaching in psychology and psychiatry should be supplemented by instruction from the physicians in charge of medical wards in the general hospitals.

To overlook or neglect a psychological cause of ill-health is often as disastrous for the patient as failure to detect organic disease.

Badly-handled neurotics form a large part of the clientele of the quack, but successfully treated ones are amongst the doctor's most grateful and satisfactory patients. For this reason alone the profession cannot afford to ignore the psychogenic illnesses as it has done in the past.

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(3) Maurice A. Cassidy: "The Treatment of Cardiac Cases", *The British Medical Journal*, Volume I, 1934, page 45.
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HARE LIP.[1]

By H. Douglas Stephens, M.D., M.S., F.R.A.C.S., F.A.C.S.,
Melbourne.

In the time limit of twenty minutes allowed for this paper it is obviously impossible to discourse on the pædiatric management and on the pre-operative, operative and post-operative treatment of the various types of hare lip. I shall therefore confine my remarks to the most severe common type, namely, the complete single cleft of the lip with accompanying cleft of the alveolus and palate. Even in this type there are so many variations, offering different operative problems, that one is forced to the conclusion that no two hare lips are exactly similar. In general, however, the problem is not so much the union of the lip as the creation of a satisfactory nostril.

Age for Operation.

Operation on the lip should be completed before the infant is four months old. If this can be satisfactorily accomplished, the pressure exercised by the musculature of the reformed lip will push back the most prominent cleft alveolus within twelve months as a rule. I used to operate during the first few days of the baby's life, but of late years I rarely operate on a baby under two months of age, unless it is growing vigorously. If the nutrition problem is under control and the infant is gaining at least four ounces a week, the age of election for operating is from six weeks to three months of age. If one is unable to operate for various reasons before the child is six months old, there is grave risk that the projecting alveolus will permanently overlap the opposite maxilla.

Feeding.

Special endeavour should be made to maintain the breast milk supply by stimulation and expression, carried out by nurses skilled in these manipulations. Failing the breast milk, ordinary cow's milk mixtures, prepared according to the caloric needs of the infant, are adequate in most cases. Some very difficult and slow feeders are better catered for by the use of lactic acid milk, with or

[1] Read before the Section of Pædiatrics at the annual meeting of the British Medical Association, Melbourne, September, 1935.

without added carbohydrate, because the greater concentration enables smaller feeds to be taken.

An infant with the type of lip under discussion is often quite unable to suck the breast at all. The rubber velum designed by Wearne, of Sydney, not only facilitates sucking from the breast or feeding bottle, but materially shortens the feeding time. I do not advise its use for more than a few weeks, as I consider that it interferes with the natural tendency to closure both of the lip and palate. Other means of feeding these babies vary with the individual infant; some take food well from a bottle fitted with a long teat and rather large opening; others do better with a Breck feeder; others again like the spoon or pipette feeding best, whilst many take food well from a funnel and small catheter, given slowly.

As pipette, spoon and catheter methods are preferred after operation, these are usually practised at any rate for a few days prior to operation. The pipette, unless well rounded, should be tipped with rubber.

Pre-Operative Treatment.

No operation is attempted if the baby has had recent contact with any infectious disease, or has any sores, a running nose, or discharging ears, or has any cough or tendency to diarrhœa. If teeth are erupting in the cleft, they should be removed prior to operation. All such conditions interfere, often seriously, with the healing processes, or aggravate the risk of bronchopneumonia or enteritis, two of the commonest causes of mortality in my series of two hundred and seventeen cases in the last nine years.

In some cases of hare lip and in all cases of cleft palate a swab is taken of the nose or throat, or both, before operation, to exclude, if possible, the presence of the Klebs-Löffler bacillus.

It is advisable to have the baby in hospital two or three days prior to operation so that it may accommodate itself to its new surroundings and enable the nurses to become cognisant of its habits and diet. A special nurse is a valuable asset in these cases.

The pre-operative period in hospital will enable the infant to become accustomed to having its elbows stiffened and in some instances its legs controlled to prevent it from rubbing its lip. The Porgett splint can be applied. This is a contrivance consisting of a head-wing prolonged forwards 6·25 to 7·5 centimetres (two and a half to three inches) and attached posteriorly to a vertical stem connected below to a straight piece to which the arms are bandaged. In this apparatus the baby can be placed face downwards for short periods at a time to enable exudations to escape from the nose and mouth without endangering the lip.

A routine X ray examination of the chest is not done; but whenever dyspnœa or cyanosis, not attributable to falling back of the tongue or to cardiac malformation, has been present an X ray examination for enlargement of the thymus has been carried out, always with negative results.

I have frequently used ultra-violet radiation in the winter, both before and after operation, with a view to improving nutrition and promoting healing, but am not certain as to its value generally, and in some cases have regarded its use as distinctly detrimental.

No food is given for at least four hours before operation.

In the preparation of the parts for operation careful cleansing of the lip and nostrils is carried out; soap and water and saline solution are chiefly used, and traumatism is avoided. Apart from boracic lotion, which is used occasionally, no antiseptics are used. On the table, the nostrils, skin and mucous membrane are dabbed gently with spirit.

The temperature of the operating theatre is approximately 18·3° to 21·1° C. (65° to 70° F.) in winter. The baby lies flat on the table on a well protected hot water bag, and a rolled-up half sheet is placed under the nape of the neck to project the chin forwards.

The anæsthetic is ether only, given by the drop method until anæsthesia is obtained, after which the ether is given intrapharyngeally through a number eight soft rubber catheter introduced into the nostril on the normal side.

The Operation.

Most writers seem agreed that no perfect result of a hare lip has yet been attained by operation. No standardized type of operation is carried out in all cases.

If, for instance, the cleft is not gaping and the nostril is not stretched and ample lip tissue is available, the simple curved incisions advocated by Berry and Legg often give excellent results, provided that the nostril is well freed from the bone and that the musculature of the lip on each side is accurately sutured.

If the cleft be wide and the *ala nasi* stretched, I am not in favour of any operation modelled on the Rose type, of which that of Berry and Legg is a modification. Such an operation involves the loss of tissue and invariably produces a very tight, flat lip and an indifferent nostril. My inclinations are definitely in favour of some form of flap operation, originally sponsored by Mirault, and it is a matter for decision at the time as to whether the flap should be taken from the lateral or the medial margin. Trial approximation of the lip margins with the fingers will generally indicate which method is most likely to give the best result.

Of the single flap methods I prefer the medial flap to the lateral flap method, if the thickness of the flap and the depth of its red border are sufficiently good to insure the fullness in the mid-line that is so essential to a satisfactory lip margin. Another reason for preferring the medial flap is that I believe it pulls the columella into a more median and vertical position and indirectly tends to straighten the nose. If it appears that a better lip can be produced by the utilization of a flap from the lateral side, then I prefer to do the Blair and

Brown modification of the Mirault operation. It is not my intention to discuss the technicalities of their method, which is certainly complex and which is more liable to lead to failure if the incisions are not absolutely accurate. My own experience of their operation has convinced me that a lip and nostril, as near perfection as possible, can be obtained in carefully selected cases.

I shall now briefly outline the operation generally carried out by me, using the medial flap.

A silkworm gut suture is inserted into the tongue to act, when needed, as a tractor and gag combined.

The first step is to estimate the probable length of lip required by employing compasses to measure and mark the distances from the imaginary floor of the nostril close to the columella on the defective side to the imaginary lower level of the lip vertically below this point (Figure I). This measurement is then transferred from the lateral and medial borders of the defective nostril to the muco-cutaneous line on either side of the cleft in a manner somewhat similar to that adopted in Thompson's operation. These points are marked by pricking

Figure I.
Compass points.

the skin edge with the compass or by using methylene blue on half a Dawson's pen nib. They are of use later on, when the parts are distorted by the extensive freeing of the alæ and lip margins, in order to refresh one's memory as to the original disposition of the parts.

The process of freeing the lateral lip margin and the ala should now be carried out (Figure II). The gingivo-labial sulcus is widely divided, in some cases almost as far out as the orifice of Stenson's duct, and into the nostril, the lateral cartilage being cut from its attachment to the maxilla, even as high up as the nasal bone. A piece of gauze on a periosteal raspatory acts as a satisfactory means of freeing the cheek from the bone, if necessary, up to the infraorbital foramen.

As the ala is lower on the cleft side and the columella is deflected at its base towards the sound side, the nose as a whole appears to be twisted away from the cleft.

These deformities necessitate more or less separation of the columella and ala on the uncleft side, if reposition is to be effective. Before doing this, cut the mucous membrane from the projecting alveolus, leaving enough attached about the region of the frenum to enable the mucous membrane from the opposite side to be adequately sutured to it. The medial lip margin is then separated from the bone, also the columella and the normal nostril, care being taken to avoid cutting into the nostril during the process.

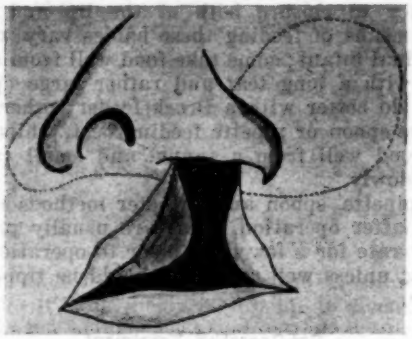

Figure II.
Lines indicate soft tissue separation.

The projecting alveolus is at this stage well exposed, and in wide clefts, where the bone projects very much, firm pressure with the thumb will often appreciably reduce it. It is not necessary to fracture the alveolus, as over-reduction is likely to ensue, with subsequent flattening and retraction of the upper lip.

The parts are now prepared for the plastic operation on the lip. The compass points are identified. On the lateral lip margin, encroaching more on the skin than on the red margin, an incision is made from the lower compass point upwards, extending into the nostril just beyond the upper compass point (Figure III). This incision in its lower half

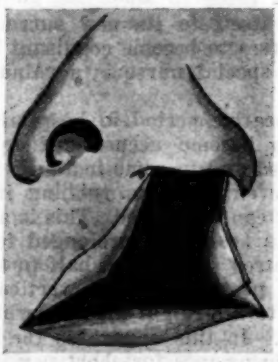

Figure III.
Lip margin incision (lateral).

cuts into the lip tissue for only three-quarters of its thickness, so that the deep mucous membrane is intact. In its upper part, where the lip is very thin, the deeper mucous membrane is incised as well, and the thin filamentous strip is removed. The lower part is now hinged backwards by continuing

the incision from the lower compass point vertically downwards through the red margin. This backwardly hinged flap is often broader than is necessary, and it may be advisable later to remove a strip of it to prevent redundancy (Figure IV). Bleeding is stopped by mosquito forceps, but no ligatures are ever used.

Figure IV.
Hinged flap from lateral margin and line of medial flap incision.

The median flap through the whole thickness of the lip is now to be formed. The tenotome is inserted at a point which varies according to circumstances, but which is approximately one-third of the distance up the lip, between the lower compass mark and the floor of the nostril, or about four millimetres (one-sixth of an inch) from the muco-cutaneous line. The knife is sometimes obliquely directed in such a way as to obtain enough of the underlying lip tissue to give fullness to the flap, and the incision is directed upwards and medialwards to the compass point just inside the nostril where the skin covering the columella and the mucosa meet.

Figure V.
Medial whole thickness flap.

The flap (Figure V) is opened out, the labial vessels are secured, and a horsehair suture is inserted into its free end to act as a tractor.

The parts are now ready for the insertion of the sutures. The first suture is of strong horsehair and is inserted into the skin on the lateral side, level with the tip of the ala; it passes across the cleft and reenters on the opposite margin, to emerge inside the nostril, just above the compass point.

As this suture forms the nostril, it may need several different insertions before a satisfactory result is attained, and should be left untied at present. To reinforce this, a deep suture of number 0 plain, sometimes chromicized, catgut is used (Figure VI); this passes from the deep aspect of the cleft in its upper part laterally under the apex of the ala and back again towards the mid-line, then across the cleft into the tissues under the columella and back again to the mid-line. When this is drawn together with a friction knot, it should, if well placed, reinforce the first suture in reforming the nostril. In doing this, try to roll the ala inwards so as to avoid the persistent tendency which it has to eversion, and remove any excess of tissue in the floor of the nose likely to occlude the airway. Leave the suture untied at present.

Figure VI.
Deep catgut suture forming floor of nostril.

The next suture is of horsehair and is placed at the muco-cutaneous margin (Figure VII). The attenuated end of the median flap is cut off at a point which will preserve the continuity of the muco-cutaneous line when approximated to that of the opposite side.

A horsehair suture is inserted, often under a magnifying glass, to insure correct placement, and is left untied. It is now possible to put in two or three deep number 0 plain catgut sutures (Figure VIII), embracing the mucous membrane and muscle on the lateral margin and the muscle and thin strip of mucous membrane on the alveolar process medially. These deep sutures are tied as they are inserted after the deep nostril catgut has been permanently tied; and when all are tied the skin edges should lie accurately apposed.

The nostril horsehair is now tied and the muco-cutaneous line suture also, and between these two

or three very fine horsehair or gossamer silkworm gut sutures, preferably atraumatic, are inserted to complete the apposition (Figure IX).

It is now necessary to bring down from behind the lower margin of the hinged flap. This should be sutured to the back of the median flap in such a way as to give fullness to its red margin, where this appears to be attenuated. One or two sutures of fine horsehair will complete the union of the red margin in front.

Figure VII.
Superficial nasal and muco-cutaneous line sutures.

Finally, in some cases the ala is supported by a silkworm gut suture passing from the naso-labial sulcus on the cleft side under the floor of the newly formed nostril into the opposite nostril and back again in close proximity to its point of insertion. This is tied over a piece of gauze at the tension

Figure VIII.
Deep catgut sutures.

considered requisite. Before this is tied, a rubber tube of appropriate size may be placed in the nostril to counteract the tendency which the upper margin has to droop; it is rarely retained for longer than twenty-four hours.

Clean the suture line carefully with saline solution, removing all blood from the sutures, and dry with gauze. Dab with spirit. No other dressing or application is used. I have long ceased to use the Logan traction bow in cases of single hare lip.

Post-Operative Treatment.

Return the baby to its warmed bed and avoid overheating.

Normal saline solution, with or without brandy, is given *per rectum* every four hours. Sterile water is administered by mouth till the baby is able to take milk feedings, which are fully resumed within twenty-four hours. No sucking from the breast is allowed till after the fifth day.

Constant attention to the lip is imperative to prevent scabs and crusts forming; gauze dipped in alkaline solution, saline solution or boracic lotion is used; and finally the lip is dabbed with spirit (one part) and boric lotion (three parts); this application dries very soon. The nostril should be cleansed also, but avoid any manipulation tending to loosen the stitches in the floor, as disfiguring dilatation of the nostril ensues. No cotton wool should be used in the cleansing process, only butter muslin.

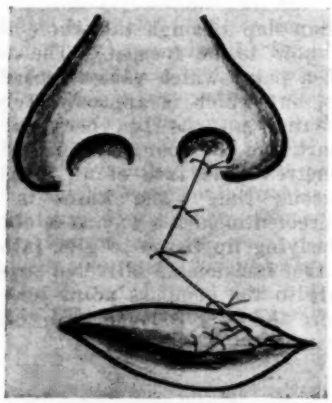

Figure IX.
Superficial sutures and hinged flap brought down and sutured.

Remove the stitches from the third day onwards, and all sutures should be out by the eighth day, except the posterior and deep sutures, which are generally spat out or swallowed later.

The Porgett splint is used to help the discharge of exudate from the nose and mouth. Check any commencing erosion in the nostril by 10% argyrol solution, two drops two or three times daily, followed by sterile paraffin (a drop or two).

Sedatives are not used as a routine treatment, but if there be much crying a minim or two of tincture of opium, repeated as required, is effective.

The infant is discharged from hospital on the ninth day, but is seen again in four days. The palate is repaired at two years. Subsequent repairs to the lip or nostril are carried out after four or five years of age.

HARE LIP: VILRAY P. BLAIR'S MODIFICATION OF MIRAULT'S OPERATION.[1]

By R. GRAHAM BROWN, F.R.A.C.S.,
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THIS contribution is intended as a plea for the recognition of the nasal deformities associated with hare lip and their correction as an essential part of the operation for repair of the lip cleft.

It must be admitted that, generally speaking, in operations for the correction of hare lip there is a failure to recognize that the correction of the associated nasal deformity is essential to a satisfactory result. That being so, the points which I wish to bring before the reader in this discussion are the following. In the first place every patient with a hare lip presents in addition deformities of the nose and face which vary in degree according to the extent of the width of the lip cleft. Secondly, in order to produce the most satisfactory repair, it is necessary to correct these nasal deformities as an essential part of the operation for closure of the cleft lip. Thirdly, if the nasal deformities are not corrected, the result generally falls far short of the cosmetic and functional ideals. Fourthly, as the child grows, the deformities tend to increase in their unpleasantness and then more difficult and complicated operations for their correction are required.

Dr. Vilray P. Blair, of St. Louis, United States of America, has pointed out that theoretically the possibilities of surgical treatment are great, whereas the results obtained by the average surgeon are poor, and that this leads most medical practitioners and the public in general to assume that the primary operation for the repair of hare lip is a very difficult one to perform.

Bilroth is accredited with the statement that a perfect operative result has never been obtained. This statement still holds good, and we must admit that surgeons fail relatively in all cases. However, by careful planning and attending to the minute details of the technique of the operation, results can be obtained that are most satisfactory, and sometimes an end result leaves little room for improvement. It is obvious that the more experience the surgeon has in dealing with any particular problem, the deeper insight he acquires, and in consequence the better able he becomes to select and to adapt methods suitable to the peculiarities of the individual case. It must be admitted that early closure of the cleft is the most important improvement in the treatment of the malformation that has occurred during the last fifty years. We are all agreed, I feel sure, that simply closing the lip, however unsightly, is a life-saving measure; but I would like to emphasize that a good repair, that is, one which nearly approximates the normal state, provides in addition a better outlook for health and happiness for the patient throughout his life. There is no plan that gives perfect results, but this is no excuse for adopting the simpler methods of closing the cleft and for being contented with the average poor result.

[1] Based upon remarks made during a lantern demonstration at a discussion on hare lip, Section of Pædiatrics, 103rd annual meeting of the British Medical Association, Melbourne, September, 1935.

Normal Lip and Nose.

If we consider the new-born babe, we find that associated with the normal upper lip there is a nose which tends to "turn up", which presents symmetrical, almost rounded nostrils, a relatively short lip from above downwards in the mid-line, and the central part of the vermilion border pouting in front of the lower lip and the chin, with a medial vertical groove, the filtrum, which is bounded on either side by a slight ridge, running from the columella to the vermilion border.

The Lip and Nostril in Hare Lip.

In a child with hare lip we find that all the above features are distorted to varying degrees. Any operation aimed at correction of all these faults that fails to produce something approximating the normal state will be unsatisfactory according to the degree of failure. In all types of cleft lip, with rare exceptions, there is a deformity of the nose on the side of the cleft and there is always some spreading of that nostril, whether the cleft is wide or just a simple notch of the vermilion border. In proportion to the extent of the lip cleft, there is a lateral displacement and distortion of the ala. In most cases it is flattened from before backwards in some proportion to the extent of the lateral spread. The long axis of the opening is rotated away from the mid-line towards the transverse and the columella is drawn over to the sound side. In the normal the extreme lower end of the ala curves around until it points rather directly towards the base of the columella. In the wide cleft it may point almost straight outwards, the degree of incurving varying according to the type of cleft (Figure I). In a single cleft of the lip the

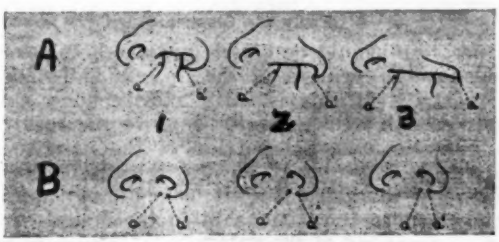


FIGURE I.

Reproductions of Vilray Blair's diagrams showing relative positions of the tip of the ala in varying degrees of spread of the lower lateral cartilage. Normally the tip of the ala a^1 points almost directly towards the mid-line at the junction of the columella with the lip a. In a young infant with a wide-spreading complete cleft, which is the extreme condition, the ala is drawn across the cleft into a tight transverse band, and the point of the ala is then directed outwards (a^1 in *A* 3). The surgeon should bring the ala into correct position, that is, the points a^1 in diagrams *A* should be pointing to the mid-line and in conjunction with the points a in diagrams *B*.

long axis of the nostril on the cleft side is more transverse than its fellow, the nostril as a whole being displaced somewhat in a posterior direction. It has receded backwards ("slumped caudally" as Blair aptly describes it), more so in its mesial than its outer half, and the nose is correspondingly flattened on that side (Figure II). In extreme instances the end of the mesial crus of the lower lateral cartilage may even be found in the lip itself, behind the lower end of the columella.

Figure II.

Reproduction of Vilray Blair's semi-diagrammatic drawings illustrating the changes in the shape and position of the lower lateral cartilage in complete cleft of the lip and palate. There is always a degree of distortion and displacement of this cartilage in every hare lip. This varies in proportion with the extent and width of the cleft, which, if left uncorrected, becomes accentuated with the growth of the child. Note the receded and laterally displaced left lower lateral cartilage in *A*, the recession being more evident mesially than laterally. In *B* the lateral spread and backward displacement of the cartilage is more obvious. Any attempt to restore the shape of the nose will be unsuccessful if it does not correct the distortion and backward displacement of this lower lateral cartilage.

To quote Vilray Blair's summary, we may say that in all degrees of single hare lip there is: (*a*) some lack of tissue at the lower border of the lip, (*b*) some lateral displacement of the two halves of the lip to either side of the cleft, (*c*) some flattening of the nostril on the affected side, (*d*) some drawing over to the opposite side of the columella, the degree of each of these being in some proportion to the width of the cleft. In double hare lip the first three are present, but the deformity of the nose is invariably much less evident.

Early Lip Closure.

Operation should be directed at the best possible immediate restoration of the lip, ala and floor of the nostril. If this is satisfactorily done, subsequent growth will generally improve the result by bringing the external portion of the nose to the mid-line and gradually closing the alveolar cleft. Closure of the alveolar cleft brings about approximately a normal relationship to the dental arches and a narrowing of the palatal cleft, which in turn aids its closure at a later date. Early lip closure, no matter how far it falls short of the ideal, will be followed usually by a good approximation between the premaxilla and the maxilla. It is not possible to restore surgically the filtrum on the defective side in single cleft or on either side in double cleft. However, if the operation has resulted in producing a good general contour, this defect may not be very noticeable.

Types of Operation.

I consider that the surgeon should carefully select a type of operation and use only that one, modifying his technique, when necessary, to suit particular requirements. Experience in this class of surgery cannot be extensive to most of us, but by following definite procedures one is more able to arrive at a certain degree of proficiency. I consider the Mirault's operation, as improved by Vilray P. Blair,

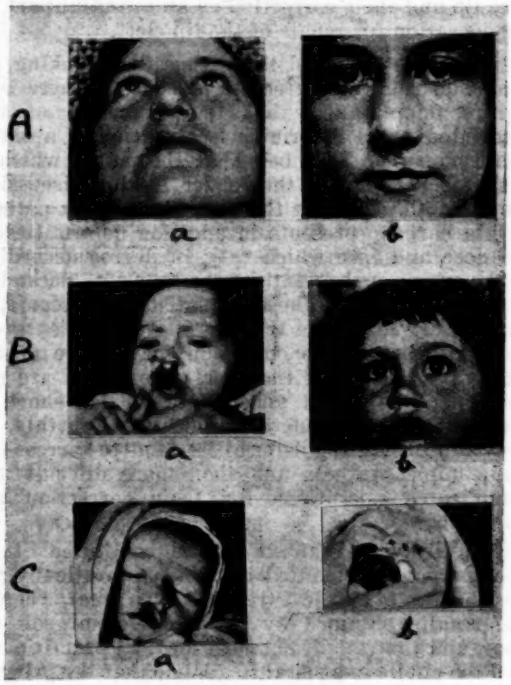


Figure III.

Photographs illustrating degrees of backward displacement, lateral spread of the nostril and rotation of its axis on the side of the cleft, and displacement of the columella to the sound side. *Aa* shows M.A., aged twenty-eight years, whose simple hare lip was repaired when aged three months. There is a slight degree of nasal and lip deformity and marked scarring of the skin of the lip. *Ab* illustrates the condition after correction of the nasal deformity by freeing the soft parts and rotating and advancing the left lower lateral cartilage. At the same time the lip deformity was partially corrected. The lip result could be further improved, but the patient and her husband preferred to leave things alone, being content with the improvement. *Ba* (C.C.) illustrates the marked nasal deformity associated with a left complete hare lip and cleft alveolus. Note the backward displacement and lateral spread of the nostril on the side of the cleft and the displacement of the columella to the sound side. Note also the alveolar cleft and the prominence of the premaxilla. Operation for closure of the cleft lip was performed at the age of eight weeks; the alveolar prominence was not interfered with in any way. *Bb* shows the condition at the age of one year and ten months. There is a good general contour of the lip, but the nasal deformity is undercorrected. The flattening of the left cheek and nostril and the backward displacement of the latter are due to failure to appreciate the degree of mobilization of the face and nose necessary to allow of the soft parts being easily swung into their proper positions. *Ca* (W.P.) shows a marked degree of backward displacement of the right nostril and face and transverse spread of the right ala in an infant with right unilateral hare lip and cleft palate at the age of eight weeks. The lip was repaired and the nasal deformity corrected at the age of twelve weeks, following Blair's technique. *Bb* shows the condition at the age of one year and three months, nineteen days after repair of the palate. Note the nearly perfect correction of the right nostril, good lip contour and satisfactory palate.

to be the most satisfactory. It really should be called the Vilray Blair operation, for he has improved it to such a degree that it bears very little resemblance to the original operation of Mirault, except as regards the paring of the cleft margin and preservation of the vermilion border. Mirault's operation more or less ignores correction of the nasal deformity, whereas Blair makes this an essential part of the operation. This operation, when skilfully performed, produces a lip which, to use Blair's own words, is a better imitation of the normal pyramidal form of the baby's lip than any other. It is more difficult than the simpler operations of Husson, Rose and Nelaton, for it requires careful planning and necessitates consideration of the restoration of the nasal defects as an important essential. The surgeon should develop the habit of accurately measuring and marking the skin before the parts are obscured by blood. Extreme accuracy is necessary in planning, cutting and suturing, and the use of dividers in marking the lip is almost essential and therefore is strongly recommended. When the edges of the cleft are being denuded it is better to remove too little tissue than to remove too much, for one can correct the former fault at a subsequent operation. The halves of the lip should be freely mobilized by undermining the cheeks through incisions in the buccal fornices and separation of the tissues from the periosteum over the maxillæ. The nasal alæ too should be thoroughly freed through the same incisions.

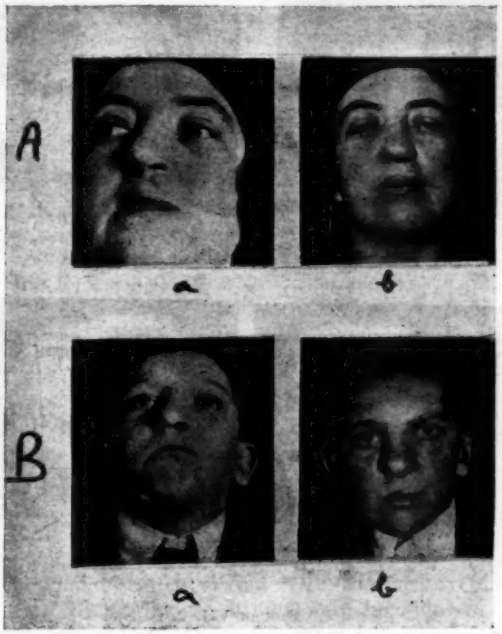


FIGURE IV.

The photographs illustrate late nasal deformities in patients in whom the primary nasal deformities had not been corrected at the time of operation for closure of the hare lip.

A. In this instance the nasal deformity is limited to the movable parts. H.S., aged twenty-six years, had a complete left-sided hare lip and cleft palate, the lip being repaired elsewhere during infancy. The palate had been operated upon twice and is still ununited. *a* shows the backward displacement of the left nostril and cheek with rotation of the ala from the mid-line; also some drawing-over of the nose to the right side. *b* shows the condition after freely mobilizing both sides of the face, nasal cartilages and columella and advancing the face and the left nostril. It was necessary to split the columella and remove a triangular piece of skin from in front of the left nostril in order to advance the left lower lateral cartilage. The lip is to be further repaired at a later date.

B. In this instance the nasal deformity involves the bony parts in addition to the soft. D.C., aged twelve years, had a complete left-sided hare lip and cleft palate; the lip repair had been done elsewhere during infancy. Two unsuccessful attempts had been made to close the cleft palate. *a* shows similar deformities as in *Aa*, but in addition the nasal bones and septum are involved. The palate was first repaired, and this was followed by a submucous resection of the nasal septum to correct the nasal obstruction. *b* shows the condition fourteen days after replacement of the nose to the mid-line, reconstruction of the left nostril and lifting forward of the face and nose. In this instance it was necessary to mobilize the nasal bones and septum in order to correct the nasal obliquity and to keep them in the corrected position by splinting, in addition to correcting the backward displacement and lateral spread of the left nostril. The lip is to be repaired at a later date.

FIGURE V.

Photographs of a girl, S.G., aged six years, whose congenital double hare lip and cleft palate had been operated on elsewhere during infancy. The palate cleft was still open. Note that there is a little spread of the nasal alæ in *a*, but in *b* a marked retraction of the upper lip with a protruding lower lip. The palate was first repaired. The lip was then improved and a split skin inlay was inserted into a transverse sulcus made in the upper buccal fornix *c*. The lip is held forward by wearing an artificial denture *d* and *e*. The columella is still to be advanced and the upper lip shortened. The difficulties to be overcome in this instance were not so marked as in the patients illustrated in Figures VI and VII, owing to a better lip closure at the primary operation.

Rotation of the Deformed Nostril.

Better cosmetic and functional results will follow rotation of the axis of the nostril than by removing tissue from the floor of the nose. In infants and young children this can generally be partially or completely accomplished by freeing the base of the columella and adjacent nasal mucosa, rotating and adjusting the ala and carefully suturing the floor. In older children, over three or five years, it is necessary in addition to split the columella deeply

in a longitudinal direction and to free thoroughly the half columella on the cleft side, together with the adjoining mucosa. The skin of the tip of the nose is undermined and a triangular piece is removed from in front of the displaced nostril. This allows the freed half of the columella to be sutured forward and also permits the displaced nostril to be rotated into its proper position. This latter restores the external shape. To correct the spread of the nostril it is necessary to rotate the ala to conform with its fellow. In a markedly flat ala the lining skin will buckle by this rotation and

Figure VI.

Photographs of a patient (P.E.), aged twenty-six years, upon whom three operations had been performed elsewhere during infancy for closure of a double hare lip and cleft palate. Note the pulling down of the nasal tip, retraction and shortening of the upper lip and spread of the nasal alæ in *a* and *b*. The face and nose were advanced after freely mobilising and the nostrils were rotated and the alæ lowered. The premaxilla was absent, which necessitated making a transverse sulcus in the lip itself, high up on its buccal aspect. A split skin inlay was inserted into the sulcus so made, *c*, which allows the wearing of an artificial denture, *d*. Later the lip was repaired, *e*, and the judicious use of cosmetic improved the general appearance, *f*. The downward tilt of the nasal tip should have been corrected at the time of "stepping forward" of the face and lip. It is intended to advance the columella on the septum at an appropriate time, which will also improve the naso-labial angle.

so obstruct the lumen. This is overcome by making an incision in the lining of the outer wall and roof, from the floor to the septum, along the upper border of the lower lateral cartilage, and below this cut the skin is freed from the underlying cartilage up to the free border of the ala. The parts are maintained in the correct relationship by through-and-through mattress sutures.

Retraction of the Upper Lip and Nose.

Retraction of the upper lip and nose is a sequela of insufficient correction at the primary closure of the cleft. Following the repair of a single or double congenital cleft of the lip and palate there may be a considerable retraction of the upper lip and nose. This is most prominent when a "V" has been cut

Figure VII.

Photographs *a*, *b* and *c* of a girl, B.D., aged twenty years, illustrate marked deformities following two operations, done elsewhere, during infancy, for closure of a double hare lip associated with cleft palate. Note the scarred, tight and markedly retracted upper lip, partly due to absence of the premaxilla. There is also a lateral and upward displacement of the nasal alæ. The palate is still ununited. To improve the almost hideous appearance of this patient presented a series of difficulties owing to a very lowered state of nutrition and the possession of an inferiority complex by the patient; there were also technical difficulties. Photograph *d* shows the state after mobilising the face and advancing it and after the nasal spread had been improved by freeing the soft parts and rotating the alæ into an improved position, both procedures being done at the same time. It was then planned to split the advanced lip in the mid-line and to insert the quadrilateral forehead skin flap between the separated parts of the lip. Although the forehead skin flap was raised three times before severing its right attachment, the blood supply to this part was so poor that it almost sloughed. The plan had to be changed and the tube pedicle flap was therefore used up to the line of demarcation, which was about the mid-line. Its free end was inserted into the right side of the split lip, the estimated forehead skin deficiency being covered with a full skin graft from the right arm. The graft to the lip was completed and the tube flap returned to the forehead at an appropriate time. Photograph *e* shows the condition one month after the forehead tube pedicle graft had been inserted into the right side of the lip and the whole skin graft implanted on the forehead. Photograph *f* shows the condition ten months after reconstruction of the lip and return of the tube pedicle to the forehead. Photograph *g* shows the present appearance after the patient has learnt to apply cosmetics to the lips. The appearance of well-being which followed the improvement in this patient's condition is clearly seen. This case illustrates the large amount of planning and work entailed in order to overcome the many difficulties presented, which were due to faulty technique at the time of the primary lip closure.

from the lower free border of the septum to move back the premaxilla, when the nasal "snubbing" developing later may be the most noticeable feature. There may be a receding upper lip or dipping tip of the nose, or both. The anatomical abnormality producing this retraction varies and may cause changes in the face that may vary from a deformity which is unpleasant to one which is hideous. This deformity is more marked when seen in profile.

The bringing forward of the retracted upper lip and nose presents many problems, for the retraction may be considerable and may vary according to the type of repair employed at the primary operation of closure. At times it is found that the premaxilla is missing, for it may have been deliberately removed or it may be rudimentary or, on the other hand, the premaxilla may have been forcibly approximated to the maxilla at the time of closure of the lip cleft and wired there.

Vilray Blair's plans for reconstructing the lip and nose in these cases fall into two groups: (*a*) The deficient maxillary foundation may be built out, thus pushing forward the retracted soft tissues. (*b*) The lip and nose may be advanced and fixed in this forward position; in other words, the cheeks, upper lip and lower part of the nose may be "stepped forward". A combination of these two plans will often give the best results.

The retracted parts may be built forward in the following ways:

1. The use of simple orthodontic treatment may give great help in some cases.

2. Implantation of cartilage or bone between the lip and the premaxilla may also be useful in building forward the soft parts.

3. A dental prosthesis may be used after the soft tissues have been liberated from the periosteum of the maxillary bones through an incision in the upper labial fornix and the resulting sulcus lined with a split skin graft.

4. The cheeks may be liberated from the maxillæ through an incision in the buccal fornix and fixed in a forward position by specially placed sutures, that is, "stepping forward the cheeks and lip".

5. The nasal tube may be lengthened by a flap from the forehead or arm or the mucosa of the mouth, which is inserted between the separated parts of the divided nose.

6. The soft tissues may be advanced and suspended in this position either by the implantation of cartilage or bone between the skin and the dorsum of the nose, or by suturing the mobilized columella in a forward position on the lower border of the septum.

A type of retracted nose is sometimes met with in which the septum and columella are both short, when the end of the cartilage of the latter will be found buried in the lip. In complete double cleft lip and palate the columella is also short, and in these cases must be lengthened in order to bring the nose forward. The lip may be lengthened but the naso-labial angle decreased by excising a diamond-shaped piece of skin and subcutaneous tissue from the base of the columella and upper part of the lip and suturing. The resulting lengthened lip may be shortened at a later date.

I am strongly of the opinion that hare lip and cleft palate cases should be passed to the care of surgeons who specialize in and have an aptitude for this branch of surgery. Even in large centres the material available is hardly sufficient to provide the necessary experience to enable one surgeon on a public hospital staff to become thoroughly proficient, let alone several surgeons. These patients, I consider, should be passed into the hands of the surgeon most suited to do the work, and not, as at present, dealt with by all and sundry in the haphazard manner that is generally adopted. Better primary operative repair should unquestionably result thereby were this plan carried out, and much of the difficult secondary work that is now needed would be avoided. Moreover the future outlook for the little patients would be brighter and credit would be accorded to the profession.

In conclusion I should like to remark that after visiting Dr. Vilray Blair's clinic I was so impressed with his teaching and operative technique that I felt it incumbent upon me to visit him again for further tuition. Experience has taught me that the correction of the deformed and displaced nostril is one of the most important steps in the operation for closure of hare lip. I have heard leading surgeons state that there is no satisfactory method for correcting the deformed and displaced nostril. I hope I have been able to refute this opinion in the short space at my disposal. I claim to be a pupil of Vilray P. Blair, a modest, though great, master in plastic and neck surgery, and I should like to think that I am his disciple in Australia, be it only in a humble degree.

ANTI-DIPHTHERIA INOCULATION: DELAYED REACTIONS IN PRELIMINARY TESTNG.

By C. R. Merrillees, F.R.C.S., D.P.H.,
District Health Officer,
Victoria.

Although Australian parents have taken to preventive inoculation more kindly of late, the fear of "Bundaberg" is readily awakened. Even for this reason alone care should be taken to avoid severe reactions, for so sensitive is lay opinion on this point that a sore arm or even the rumour of one will be followed by the withdrawal of many parents' consent, not only in that school, but in the surrounding district as well. Any new reaction, therefore, is worthy of notice, especially if it be one that promises unpleasantness if it be ignored or overlooked.

Formalinized anatoxin is now of almost general use in Australia and is likely to remain so unless the newer "one shot" preparations become more trustworthy and free from their unpleasant complications. But anatoxin itself causes severe reaction in certain persons, whom we call "hyper-

sensitives", and the percentage of these is much greater than was believed a year or so ago. The writer has found them in children under six months old, and one class of elder children in a country school held about one-third of strong reactors and several doubtful reactors (A. B. Hewitt, Koo Wee Rup).

By a very simple test, generally known in Victoria as the Moloney test, one can discover these hypersensitives. The test, described in the Commonwealth Serum Laboratory pamphlet, consists in the intradermal injection of 0·005 cubic centimetre of anatoxin in 0·1 cubic centimetre of normal saline solution. Hypersensitivity is shown by the appearance of the Moloney reaction the following day. It is distinctive in colour and texture and a positive result is arbitrarily fixed at an area of, say, a threepence (1·5 centimetres in diameter), but is usually about 2·0 centimetres, though rarely greater than 3·0 centimetres (florin).

The necessity for the use of this test and the consequent extra visit have induced many, especially country practitioners, to omit the Schick test, for the reading of which still another visit would be necessary. The children are subjected to a Moloney test and are examined the following day. The hypersensitives (Moloney positives) are sent away and the remainder are given their first prophylactic dose of 0·5 cubic centimetre of anatoxin. They are thus treated as reactors to the Schick test, and no further visit is made until the time of the second treatment.

Suspicion of the reliability of the Moloney test to detect these hypersensitives was raised in 1934 by Dr. A. Taylor, Medical Officer of Health, Dandenong, whose experience indicated the existence of a delayed reaction, which, for shortness, we have called the "Taylor" reaction.

During a routine school inoculation one child who had been recorded as not reacting to the Moloney, but reacting to the Schick test, received her first treatment dose of 0·5 cubic centimetre. Three days later the child became ill. She complained of pain in her arm, which was very sore and swollen over its greater part, especially at the site of the injection in the posterior deltoid furrow. There was even then the clear remains of a vigorous reaction at the site of the Moloney test, and Dr. Taylor's misgivings were aroused that a positive reaction had been overlooked.

We had recently discussed another such "missed" Moloney reaction, which was fortunately discovered on the fifth day, when the Schick test was read, and, as the extreme care and the cross-checkings used at this school made two such accidents unlikely, a careful inquiry was made, which showed that in each case the appearance of any reaction was not earlier than the beginning of the fourth day. Considered as a Moloney reaction, there was undoubtedly a long delay in each case, and there were other striking differences, namely, appearance and long duration, and both patients were definitely Schick reactors.

Another case, reported by Dr. K. Brennan, District Health Officer of north-western Victoria, but with more alarming general symptoms, shook the writer's confidence. It was obvious that, were the Taylor reaction to become common, the injection of the prophylactic dose of anatoxin, relying on a second-day reading of the Moloney test, would lead to the occurrence of an embarrassing number of severe reactions. Nor could the reading of the test be delayed to the fourth or fifth day, because by that time a large number of positive reactions would have faded.

That the Taylor reaction was fairly common is suggested by recent experience. A dozen or so cases reported last year by various officers (Dr. A. Derham, Dr. G. Leary and Dr. J. Shilliday) brought the total to twenty, and the writer's own cases showed five positive results in 5,700 children, or something in the order of one per thousand.

The criticism of "faulty observation" can be met under two main headings. The first, already touched upon, is that the Moloney reaction was actually present but was overlooked or not recorded. The routine followed makes this extremely unlikely. The importance of detecting the hypersensitives itself makes the operators watchful. The children are not examined until the rolls have been called and the numbers checked. The children with positive and doubtful reactions are stood away from the others; all are again examined, and to avoid the possibility of carelessness on the next visit they are crossed off the roll in red pencil if a positive or a partial positive reaction is detected.

Another criticism is that there has been confusion and that the testing fluid has been contaminated with the Schick toxin or that even the syringes have been exchanged. This is given colour by the fact that all the children submitted to the Schick test gave positive reactions. Against this is the fact that in most cases two operators were working, each with his own set of instruments and fluids, and to effect exchange of syringes without detection an atmosphere would be necessary such as led to the exchange of rapiers in the last scene of "Hamlet". Moreover, the Taylor reaction has been reported in schools in which no Schick toxin was used.

Apart from this general unlikelihood, there are differences of appearance and behaviour between all three. The Taylor reaction develops at the site of the Moloney injection about the end of the third day. It is usually large, 2·5 to 4·0 centimetres, with a raised shiny surface. Its colour is an irregular mottled red and is well described by the children as "underdone steak". It fades slowly and leaves a bruised-looking patch that persists for a fortnight or more. It is probable, of course, that the reaction occurs in a lesser degree, but so far none but well-marked patches have been noted, all well above the size of the average Moloney patch.

There is little doubt about the warning conveyed by the Taylor reaction. Only two reactors have been given treatment doses and both became ill in circumstances strongly suggesting cause and effect. The explanation is more difficult; in fact a reasonable one had not been put forward; and when such a suggestion is made, comments thereon will be

Table of Comparative Reactions.

	Taylor Reaction.	Schick Reaction.	Moloney Reaction.
Incubation	Three days.	Three days.	Under one day.
Duration	Several days to one week; persistent discoloration.	Two to four days.	One to three days.
Appearance	Irregular mottled "raw steak" red.	Light rose regular concentric shading.	Deep rose frequently shaded but regular.
Interrelations	Schick "positive", Moloney "negative".	Usually Moloney "negative".	Usually Schick "negative".
Significance	Hypersensitive to anatoxin. Probably susceptible to diphtheria.	Not sensitive to anatoxin. Susceptible to diphtheria.	Hypersensitive to anatoxin. Seldom susceptible to diphtheria.

left in more competent hands. One suggestion, however, needs mention here. It has been said that the Taylor reaction is due to residual toxin in the anatoxin. There is some support for this in the supposition that all Taylor reactors react to the Schick test, and the appearance of the reaction itself is similar to that produced by a large overdose of Schick fluid. Against this we have the rareness of the reaction and the fact that the residual toxin in the material used was practically nil. The same batch of toxoid was used for both testing and treatment, and any great amount of residual toxin would have shown itself unpleasantly in those Schick reactors who received their treatment doses.

With a view to disclosing some connexion between the Taylor reaction and that due to serum, one adult and two adolescent volunteers received further control injections of heated toxoid, antitoxin and horse serum and of the last two unheated and undiluted. Two gave no reaction to any, but the adult reacted a little too briskly to the serum to permit of further experiment for the present. The indication, however, is that there is no connexion.

Summary.

The Taylor reaction develops on the site of the Moloney reaction, but about forty-eight hours later. It was first reported in 1934, since when twenty cases have been noted. It probably occurs not less often than once in each thousand cases. Insufficient observation has been made to disclose any connexion between it and serum reactions, and what has been made suggests that there is none.

All the reactors react to the Schick test, but not to the Moloney test. They are hypersensitive to anatoxin, with an incubation period corresponding to that of the test. The comparative reactions are shown in Table I.

Conclusion.

Mass inoculation of children, especially older children, involves some risk of severe reaction, unless: (*a*) a Moloney test be made and read the following day, and (*b*) the arm be again examined on the fifth day or thereabouts for the Taylor reaction. The Taylor reaction is conveniently discovered at the time of reading the Schick test. As the Moloney reaction is much more frequently seen than the Taylor, on no account should the reading of the former test be omitted on the second day.

Acknowledgements.

Acknowledgements are due for the help of the medical officers referred to, and to Dr. C. W. Adey (Commonwealth Serum Laboratories) for assistance in interpreting this phenomenon.

Reports of Cases.

ACUTE PEMPHIGUS: REPORT OF A FATAL CASE OCCURRING IN A SHEARER.

By E. AUFRÈRE COOK,
Medical Superintendent, Barcaldine District Hospital, Queensland.

J.H.McI., aged twenty-two years, a shearer, single, was admitted to hospital suffering from an extensive pustular rash on the flexor aspects of both forearms. It was principally confined to the left side and consisted of a closely packed mass of discrete yellow pustules, extending from the wrist to the middle third of the forearm. He had in addition a lymphangitis and some cellulitis on this side, extending as far as the axilla. There was very little reaction on the right side.

He said that the eruption had commenced to appear while he was shearing about a fortnight before, first as an itchy, pimply rash, due, as he affirmed, to the constant irritation of the burrs in the fleece. He was wearing no protection on the arms and, furthermore, the sheep were badly affected by blowfly, with much fouling round the crutch of the animals. He took little notice of the condition until the rash became painful, and cellulitis appeared. This caused him to fear blood poisoning and he came to town for treatment.

On examination both forearms were found to be covered with the impetiginous rash above described. He was a well grown young adult. His previous history disclosed that the only illness from which he had suffered was an attack of varicella and measles while a child. Apart from these and an occasional attack of influenza, he had been perfectly healthy. He did not smoke and did not drink. There was no history of venereal disease. All his family were alive and well and in good circumstances. The maternal grandfather had committed suicide, but there was no sign of neurosis in the present generation. All systems were clear.

He was put on treatment for the reduction of the cellulitis and cure of the impetigo. Ichthyol and glycerine (10%) were applied to the arm, with baths and acriflavine dressings to the forearms. His general condition was good, but he was kept in bed, as his temperature was slightly raised. This fell to normal on the fifth day, and on the sixth day from the date of commencing treatment he was allowed to get up and walk about. On the seventh day the arm seemed slightly offensive and he was put on a course of "Collosol manganese", receiving his first injection on this day. All went well until the twelfth day,

by which time the condition had practically cleared up, and the temperature had remained normal for seven days. In the evening of this day, however, it was noticed that he had a slight rise in temperature, and during the night he complained that his skin was intensely itchy all over, especially under the left armpit, where the foments had been applied. The following morning it was noticed that the left axilla, the skin of the neck under the chin, and the scrotum were tender and covered with small pustules. Later that day one or two blebs, about the size of a shilling, were noticed on his abdomen, containing a clear watery fluid. They looked exactly similar to the blebs of a varicella, but larger, with no tendency to umbilication. They seemed to attack those parts of the body where normally the skin is usually softer owing to constant perspiration, for example, the skin of the neck under the chin, the axillæ, the perineum and scrotum. A calamine lotion was applied, but no special significance was attached to the condition at this time.

The following day, the thirteenth day in hospital, the general condition became decidedly alarming and rapidly assumed the appearance of an overwhelming toxæmia. He had been unable to sleep all night owing to the intolerable itchiness of his entire body. Morphine was used to combat this, but later an injection of adrenaline hydrochloride (1 in 1,000) was given with instant relief, and from this time he never complained of this symptom. His general appearance was hectic and anxious, his temperature soared to 39·7° C. (103·6° F.), and his skin was a mass of large watery blebs, mostly the size of a florin, but many as large as a saucer from coalescence of neighbouring blebs. The temperature chart is published herewith. There was a slight hyperæmia at the extreme edge, but no general reddening of the skin. He was given twenty cubic centimetres of anti-staphylococcal serum and a third dose of "Collosol manganese" on this day.

During the following night the patient was delirious, and while he was turning and twisting in the bed the larger blebs, which had formed chiefly round the buttocks and genitals, broke down, soaking the bed-clothes with serum, and leaving the *cutis vera* exposed. This he tore at with his hands, making the flesh bleed freely. The condition was now regarded as acute pemphigus, and his parents were warned of a probable fatal issue.

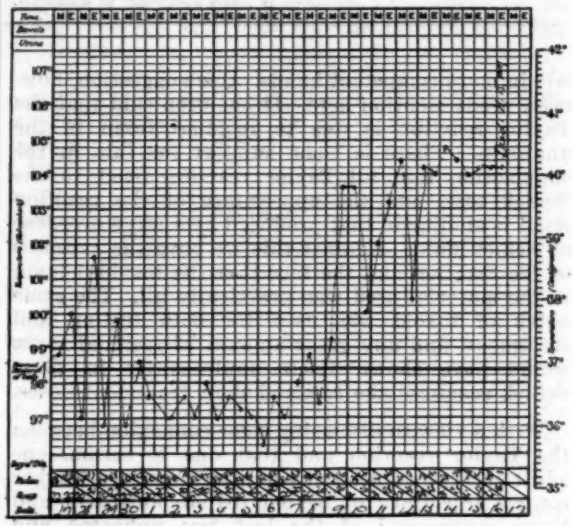
The pemphigus chiefly affected the extremities, buttocks, back and genitals, neck and axillæ. The abdomen was comparatively free, and the thorax, anteriorly, nearly free. He was given *Liquor Arsenicalis*, the initial dose being 0·36 cubic centimetre (six minims) three times a day, 0·06 cubic centimetre (one minim) being added every day. He vomited a good deal all this day and again became delirious and disorientated; he remained in this condition until his death. A characteristic of the delirium was that he had delusions of catastrophic events, for example, his father had just killed and secretly buried his mother. A sheet waving in the wind was a crashing aeroplane, *et cetera*. The mucous membrane of the mouth and pharynx became affected at this time. Blebs and raw areas could be seen scattered over the buccal mucosa, pharynx and tongue. His condition remained thus until the twentieth day, when he sank and died in coma, seven days from the onset of the acute illness.

Much difficulty was encountered in applying any dressing to the skin, which would remain unsoiled for not more than an hour or two, owing to the large amount of surface and the constant exudation of sero-pus. Finally, after tannic acid solution and various powders had been tried, it was decided to let the patient lie on a large sheet of lint covered with soft paraffin. This was removed and changed daily, as any movement caused intense pain, and a daily dressing of this magnitude was as much as could be borne. The chest and abdomen were more easily dealt with, on account of the smaller amount of tissue involved, the action of the hot, dry air, keeping the skin moderately dry and the blebs unruptured. An emollient powder was dusted over this part and the concretions were removed if they became foul.

The urine remained clear until twenty-four hours before death, when a catheter specimen contained a heavy cloud of albumin. The bowels remained costive during the whole course of the acute illness.

The pathological report on a specimen of sero-pus withdrawn from the vesicles was as follows: Examination of a direct smear revealed pus cells, staphylococci and short-chain streptococci. A stained smear showed no acid-fast bacilli. Culture yielded a heavy growth of *Bacillus pyocyaneus*, *Staphylococcus albus*, and a few short-chain streptococci.

Permission for *post mortem* examination was refused.



Temperature chart of patient with acute pemphigus.

Comment.

The question of the ætiology of acute pemphigus is of importance, not only on account of the rarity of this disease, but also because this complaint is generally regarded as directly due to the contact of the worker with septic animal poisons.

There is a general desire among the present-day shearers to be reassured that the type of work they are called upon to do will not prove prejudicial to health; they are specially concerned with the poisonous arsenical dressings generally used to combat blowfly strike in the sheep. The use of these solutions has been claimed by certain shearers to have a prejudicial effect on their health.

The ravages of the blowfly in a neglected animal are quickly fatal, whole pieces of flesh becoming undermined and coming away when touched with the shears; the abundant sero-pus stains the fleece round the crutch. This suggests the possibility of a combined reaction of the animal both to the ravages of the maggot and to the arsenical preparation driven into the skin, some compound of ptomaine or histamine being produced, a compound as potent as the ancient *Aqua Tofana*. This poison and the equally efficacious *Aquietta di Perugia* of the Medicis were prepared by rubbing white arsenic into the flesh of a pig and collecting the serum which drained from it. Six drops of this material were sufficient to produce death. Be that as it may, there is ample possibility of inoculation with the "septic animal poisons" which are at present regarded as the actual cause of acute pemphigus. The fact that the disease occurs in those who are in constant contact with the skins and flesh of animals points to its probable origin.

Demme[1] found in the serum of the clear unruptured bullæ a diplococcus which grew in rosette form on agar and was pathogenic to guinea-pigs when injected into the pleura; but it did not reproduce the disease. This was confirmed by Bleibtru, Bulloch and others. In the cases reported by Pernet and Bulloch[2] those affected were

chiefly butchers or persons handling meat, skins *et cetera*, and in some instances there was a history of a small septic wound, generally on the hand, that was inflicted a month or two before the outbreak of the general eruption. Pernet[3] puts the fatality rate at 75%, death taking place in from one to three weeks. Pusey[4] quotes Bowen and Howe, who described an epidemic of acute pemphigus, following vaccinations, during an epidemic of smallpox, when a great many vaccinations had been done. In many of these cases there was a history of a definite preceding wound. Pusey's own case occurred in a sheep butcher.

The symptom complex of this rare disease would then be as follows: First there is a wound, usually on the hand, in those who come in contact with "septic animal poisons"; this precedes the general septic intoxication by a varying period of from two weeks to two months. The acute illness, which sets in suddenly, lasts from one to three weeks and is fatal in 75% of cases. The acute stage is characterized by an intense septic intoxication, with a generalized eruption of large bullæ, containing sero-pus, which appear in successive crops. The epidermis is alone involved, the *cutis vera* being left exposed when the bullæ break down. The mucous membrane of the mouth and pharynx is affected; and also there was some evidence in this case to suggest that the lining of certain abdominal viscera, such as the stomach, bladder and rectum, was similarly attacked.

This case was considered sufficiently rare to warrant reporting, both on account of the fatal issue in a healthy young adult and because in a country primarily concerned with the production of meat and wool it seems surprising that these cases are practically never seen. The available literature on the subject is difficult to secure, and I have had great difficulty in obtaining the small amount of information here recorded.

Although there is no direct evidence that this case was caused because the patient's occupation of shearer brought him into intimate contact with the septic condition of the animals generally regarded as a necessary concomitant in the eventual production of the disease, there is nevertheless a definite implication that the actual source of the infection was here. This fact may possibly have some bearing on the conduct of shearing practice generally, especially in reference to the treating of badly struck sheep; and also on the wisdom of using dangerous poisons in the spraying fluids now universally used in the industry.

References.

(1) Demme: Quoted in "Encyclopædia Medica", Second Edition, Volume II, page 368.
(2) Pernet: *British Journal of Dermatology*, Volume XXII, 1910, page 1.
(3) Pernet and Bulloch: *British Journal of Dermatology*, May, 1896.
(4) Pusey: "Principles and Practice of Dermatology", Third Edition, page 286.

Reviews.

CHEMISTRY FOR PUBLIC HEALTH STUDENTS.

It is eleven years since the previous edition of Dr. A. W. Stewart's "Public Health Chemistry" was published. The new edition (third) has been revised throughout and valuable additional material included, enhancing its already well recognized value as a laboratory bench book for those engaged in qualifying for the Diploma in Public Health.[1]

Dr. Stewart, who is the Director of Chemical Laboratories of the Royal Institute of Public Health, London, has arranged the work to suit admirably those who, as is the case with many students seeking the Diploma in Public Health, may have been out of contact with chemical studies for some time. The descriptions of analytical processes are set forth with admirable completeness and clarity, and appropriate references are made to the fundamental chemistry involved.

The book is arranged in six parts, dealing respectively with general volumetric analysis, air analysis, water analysis, analysis of foods and beverages, disinfectants and preservatives, microscopic work and reports. Well proved methods are given for all determinations, together with excellent comments on manipulative details and on the interpretation of results. In the matter of interpretation of results of water analyses the standards used are apparently based chiefly on English experience and one or two qualifications will be made by those using the book in Australia.

Such contingencies are provided for, however, since the book is interleaved throughout, space being provided for those jottings which every student should make, but for which the easily lost old envelope is too frequently employed.

Well selected lists of references are given at the ends of the sections dealing with water analysis and the analysis of foods and beverages, and in the final section there are given summaries of important Ministry of Health and other reports on matters of public health interest. This last section is particularly interesting, containing altogether twenty-five summaries of authoritative reports on such subjects as toxic metals in foods, effects of treatment of flour with chemical substances (bleaches and improvers), the value of boiled milk as a food for infants, the biological properties of human and cow's milk in relation to infant feeding, the use of proprietary foods for infant feeding, the pasteurization of milk, preservatives and colouring matters in foods, the solubility of glazes and enamels used in cooking utensils, vitamins, and the effect on foods of fumigation with hydrogen cyanide.

The original references are, of course, given at the beginning of each summary, and there may be many other than those concerned with the Diploma of Public Health course who will find interest in this section.

[1] "A Manual of Practical Chemistry for Public Health Students, Especially Arranged for Those Studying for the D.P.H.", by A. W. Stewart, D.Sc., A.I.C.; Third Edition; 1935. London: John Bale, Sons and Danielsson. Crown 8vo, pp. 121, with illustrations. Price: 7s. 6d. net.

PATHOLOGY.

The second edition of Boyd's "Pathology of Internal Diseases" follows its predecessor after an interval of four years.[1] As in the first edition, the author has wandered freely into the realms of pathological physiology and medicine, and in his preface to this edition he states that his aim is to develop the subject more along these lines than to add material which is pathological in the strict sense of morbid anatomy.

Although much of the work has been rewritten and new material has been added, there has been no appreciable increase in the size of the volume. The general arrangement is the same as in the first edition, except that the references have been arranged under subject headings instead of alphabetically. As before, the references are very numerous and modern.

In the chapter on diseases of the heart new material is present on circulatory failure and on non-occlusive coronary insufficiency. Several pages on arterial hypertension, its varieties and effects, are a welcome addition to the section devoted to diseases of the arteries. The section is now very complete and includes all recent views on the subject.

The section on the bacteriology of influenzal pneumonia has been rewritten, and the chapter on the pneumokonioses greatly enlarged. Hæmatite miner's lung, reported by Stewart, is described. In dealing with tuberculosis, the author has introduced a new chapter on childhood tuberculosis, with particular reference to the

[1] "The Pathology of Internal Diseases", by W. Boyd, M.D., M.R.C.P.E., F.R.C.P., Dipl.Psych., F.R.S.; Second Edition; 1935. Philadelphia: Lea and Febiger. Royal 8vo, pp. 904, with 335 illustrations. Price: $10.00 net.

Ghon lesion. He admits that the views expressed are by no means universally accepted. In a text-book of this size one feels that the author might have given more space to mycotic infections of the lung.

A notable absence from the book is psittacosis, a disease which has been recognized quite recently in humans for the first time in Australia, although proved by Burnet to be very prevalent among Australian birds. In view of its occurrence in other countries, we feel that a description of the lesions of this disease should be in a text-book of this kind.

The author has added to the chapter on the ætiology of gastric ulcer. The views expressed, however, are still the subject of much controversy and are unacceptable to many writers. He has included a small section of chronic follicular gastritis, diffuse gastric hæmorrhage, and on that rare condition, tuberculosis of the stomach. He has omitted a short chapter on the intestinal tract in deficiency disease which appeared in the first edition.

In the pages devoted to the liver there has been considerable rearrangement. Hæmochromatosis is dealt with in connexion with the pancreas. No mention is made of the work of Cameron and Mayes on the circulation, of the work of Turnbull on glycogenic infiltration, and of the work of Cameron and Oakley on biliary obstruction. An interesting inclusion is a short description of glycogen storage (von Gierke's) disease. The chapters on jaundice have been largely rewritten and a new terminology, which has much in its favour, has been introduced. Much new work is included in the chapters on the gall-bladder.

The section on diseases of the kidney remains largely unaltered, except for a short description of renal dwarfism.

A full description of hyperparathyreoidism is given, with references to all the recent work that has been published on this interesting condition. Diseases of the pituitary body have been brought up to date and new material has been added.

The section on diseases of the blood has been largely rewritten and recent work on anæmias has been included.

The author presents an excellent account of that debatable condition *status lymphaticus*, with a full discussion of the varying opinions which are held.

The section on diseases of the nervous system is improved by the addition of new material on thrombosis of the inferior cerebellar artery and encephalitis B.

Altogether more than forty-seven new illustrations have been added. These maintain the high standard of excellence of the first edition.

This work is most readable and can be highly recommended to both pathologists and physicians.

DERMATOLOGY.

"Common Skin Diseases" has very rapidly reached its third edition.[1] Dr. A. C. Roxburgh is to be congratulated on the maintenance of the excellent standard set by previous editions. A revision has been made in the form of expressing the metric proportions of the various ointments and lotions. Use is now made of the percentage system for metric prescriptions and grains per ounce for the apothecaries' system.

It would be useful if this method were adopted in other dermatological text-books and medical journals. This work is intended for the use of the general practitioner, and no attempt is made to deal with rare dermatoses, but such is the excellence of the descriptions of the commoner disorders that it will be found to be an essential requirement for the dermatologist's library.

We are surprised at the omission of the occlusive dressing method of treating impetigo, which has proved such an enormous improvement on the older methods.

Sound, simple and short directions are given for the treatment of eczema. It is better to make use of a few well-tried remedies rather than to become lost in a maze of complicated and often useless formulæ. The discussion on the differential diagnosis is particularly good; unfortunately the author is not able to provide us with any new and certain method of cure.

In the prognosis of acne the oft-given advice that the child will "grow out of them" is rightly termed cruel. By the time many do "grow out of them" they are badly scarred and have developed a feeling of inferiority. Pride of place is given to X rays in the treatment of acne, injections of vaccine or manganese being described as of very occasional benefit.

Malignant growths of the skin are fully dealt with, and the frequency of solar keratoses as precursors of basal-celled epitheliomata in Australia is noted.

The paper, printing and half-tone illustrations are good, but the coloured plates are not distinguished. A splendid index is provided, which proved correct on a random check of fifty entries.

[1] "Common Skin Diseases", by A. C. Roxburgh, M.A., M.D., B.Ch., F.R.C.P.; Third Edition; 1936. London: H. K. Lewis and Company, Limited. Demy 8vo, pp. 419, with illustrations. Price: 15s. net.

TREATMENT OF ACUTE POISONING.

Dr. H. L. Marriott, in his little book, "The Treatment of Acute Poisoning", has set out to simplify this subject, and this he successfully accomplishes.[1] He deals first with inhaled poisons, chiefly carbon monoxide, which, he points out, causes in Great Britain and the United States of America more deaths than all the other poisons combined; he then considers swallowed poisons. In the latter class he stresses the supreme importance of copious gastric lavage, and shows how this can best be carried out. All those who do *post mortem* work know that this is not a simple matter, as it is not unusual to find a large quantity of poison remaining in the stomach after unavailing treatment, especially when the poison taken was in solid form.

The author deals in a clear manner with the common modes or mechanisms by which life is primarily endangered—asphyxia, coma, dehydration and dechloridation, pain and shock, convulsions. This book should be in the hands of all general practitioners and resident medical officers of hospitals.

DISEASES OF THE HEART.

We are glad that the publishers have thought fit to bring out a third edition of "Recent Advances in Cardiology".[2] It is five years since the last edition was published, and since then there has been considerable advance in this branch of medicine.

What we wrote concerning the second edition is true of this—that the book is full of good things. It is eminently practical and there is an excellent *résumé* of the recent work on the mechanism of heart failure.

Many of the more recent drugs are mentioned and criticized. Praise is bestowed where thought fit, and when the authors consider that certain drugs are useless, they are not afraid to say so.

We should have liked to have seen more about the fourth lead in the electrocardiographical section of the book.

That portion of the book on vascular diseases is quite good, except that we regret that no mention has been made of acetylcholine and such preparations for the treatment of *thrombo-angiitis obliterans*.

As we mentioned in the review of the second edition, it is a great pity that a chapter has not been devoted to the recent work concerning the blood supply to the heart, as a knowledge of this will often explain the why and the wherefore of many cardiac symptoms.

Concerning the rest of the book we have nothing but praise to bestow. It can be recommended to any physician who desires to keep reasonably up to date in this subject.

[1] "The Treatment of Acute Poisoning", by H. L. Marriott, M.D., M.R.C.P.; 1935. London: John Murray. Demy 8vo, pp. 57, with illustrations. Price: 5s. net.

[2] "Recent Advances in Cardiology", by T. East, M.A., D.M., F.R.C.P., and C. Bain, D.M., M.R.C.P.; Third Edition; 1936. London: J. and A. Churchill Limited. Demy 8vo, pp. 361, with illustrations. Price: 12s. 6d. net.

The Medical Journal of Australia

SATURDAY, APRIL 11, 1936.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

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THE TREATMENT OF SKIN CARCINOMA.

BASAL- and squamous-celled skin carcinoma is commoner in Australia than in many other countries. Much has been written on the causation of skin carcinoma and the view that excessive exposure to sunlight is often the chief factor has been generally accepted. The sunshine and the open-air life enjoyed by Australians are not without their disadvantages. In spite of the recent additions to knowledge very little care seems to be taken by people with sensitive skins, and medical practitioners are busy and will continue to be busy in trying to remedy the results of forgotten indiscretions or of a life spent without thought or care in the open.

Confining the present discussion to basal-celled carcinoma or rodent ulcer of the face, we may state that the treatment, even in the early stages, is not so simple as it would appear. An immediate and successful outcome is possible only if the original treatment is so planned and carried out that all the malignant cells are either removed or destroyed. Difficulties are enormously increased once recurrence has been allowed to occur. Three methods of treatment are available: radiotherapy, excision and electrocoagulation or diathermy. It is of the utmost importance that medical practitioners should know the advantages and disadvantages of each method, what may be expected from them in different circumstances and how extensive their own knowledge must be before they are qualified to use them. Radiotherapy may be given by X rays, by radium or radon at a distance, or by radium or radon implanted round the tumour. (It is not necessary to state the minimum requirements of voltage, screenage, focal distance and so on.) All these methods must include the irradiation of 0·5 and up to 1·0 centimetre of apparently healthy tissue surrounding and underlying the tumour, even if it is only small. When surgical excision is used, at least 0·5 and up to 1·0 centimetre of apparently healthy skin and tissue around and beneath the tumour must be removed together with the tumour. The same margin and depth of apparently healthy tissue must be included when electrocoagulation is used.

The several methods may be reviewed in the following way. Radiotherapy has several advantages. With the exception of radium implantation, it is painless. In the second place, if the implantation of radium is again excepted, radiotherapy does not appear to the patient to be an operation—the patient knows that there is no cutting to be done and no state of anæsthesia to be faced. There is no doubt that this is one of the most important advantages of radiotherapy and is responsible for the great rarity today of the horrible gaping erosions involving nose, eye, superior maxilla, and so on, that were not uncommon twenty-five years ago. It is further claimed for radiotherapy that in the treatment of early tumours with an apparent depth of not more than one centimetre practically 100% of cures are obtained; the proportion of cures when bone and lymph glands are involved is, of course, much less. As a rule the scar left by radiotherapy after treatment of small lesions is flat and soon becomes hardly visible; with larger lesions the cicatrix may be noticeable and possibly some telangiectases may be present. Multiple lesions

may be treated by radiotherapy without great inconvenience to the patient. Among the disadvantages of radiotherapy is the necessary stay in hospital of a patient treated by radium implantation or by radium at a distance. Another disadvantage, in that its application is restricted, is that radiotherapy calls for special training, the possession of what may be called a radiation sense, and the knowledge of physical laws. To undertake treatment without adequate training is to court disaster. Radiotherapy is also much more expensive to the operator (though not always to the patient) than either surgical treatment or diathermy. The advantages of surgical treatment are many. It is quick and inexpensive to the operator. Even if a wide excision is undertaken and the raw surface can be sutured, the patient may have merely a linear scar as an insignificant memento of the operation; the healing period in many cases is short. If the tumour is suitably placed, the procedure is not as a rule difficult; and good results are obtained if the surgeon has appreciated the extent of the tumour and has planned his operation accordingly. (Here it may be stated, though rodent ulcers are under consideration, that surgical excision is the only method suitable for melanomata; melanomata are radio-resistant and, in the opinion of many experts, should never be subjected to diathermy.) The greatest disadvantage of excision is that the patient regards the procedure as an operation, which makes for procrastination with its dreadful sequelæ. The cosmetic result is often inferior to that produced by radiotherapy; this is particularly true of ulcers involving the eyelids. From the operator's point of view there is a disadvantage in the apparent simplicity of excision. There are very many more scalpels in commission than there are forms of radiotherapeutic apparatus, and for cosmetic reasons even the practised surgeon may be tempted to make too limited an excision. Obviously multiple lesions are seldom suited to excision. As for diathermy, its only advantage appears to be that it is inexpensive to the operator; apart from this it has no advantages over radiotherapy or surgery, though it will be admitted that it may be used in judicious combination with radiotherapy and surgery in very advanced and what appear to be hopeless cases. The chief disadvantage of the use of diathermy is that the recurrences are much more numerous than after either radiotherapy or surgical removal. This applies to electrocoagulation proper. What is known as sparking is tinkering of the worst type and should never be used in the treatment of skin carcinoma. The reason for failure with diathermy is, as already implied, that if a permanently good result is to be obtained just as wide an area of apparently healthy tissue has to be coagulated as has to be excised by surgical operation or included in an irradiated area. Moreover, if there is no skimping, the use of diathermy, especially in certain situations, such as the *alæ nasi*, eyelids, ears and so on, produces the same amount of mutilation as surgical operation. It is believed by some observers that the recurrences after diathermy are usually of increased malignancy and sometimes extremely vicious. The scar following diathermy is more unsightly than that following radiotherapy or surgery; it also is subject to contraction.

From this statement of the case readers will conclude that some form of radiotherapy will generally be the most suitable treatment, though sometimes excision may be equally valuable and in certain situations perhaps preferable. Diathermy does not find a definite place. This discussion has been made necessary by the activities of certain salesmen of diathermy apparatus, who travel the country, particularly in central districts, where rodent ulcers are prevalent. One of the arguments put forward by these persons is that in the treatment of rodent ulcers alone the practitioner will soon pay for the cost of the machine. On many occasions the indiscriminate display and unnecessary use of diathermy machines have been condemned in these pages. Itinerant salesmen are trained to talk and they may easily prevail on the unwary. The purchase of a diathermy machine is no short cut to avoid post-graduate training in radiotherapy, with its necessary solid background of knowledge of physics; it is no substitute for mature surgical judgement and surgical skill, born of long training, patient study and merciless self-appriasement.

Diathermy has its uses, and they are many; but the medical practitioner will do well to learn what is to be learned about it from reliable medical sources and not from travelling salesmen, glib of tongue and specious of argument.

Current Comment.

FOREIGN PROTEIN THERAPY.

"ONE of the most difficult problems in modern medicine is the proper evaluation of new therapeutic measures that cannot be tested accurately either by animal experimentation or by carefully controlled statistical studies on patients. Foreign protein therapy is an excellent example of such a form of the treatment." So writes Russell L. Cecil, whose review of the present position of non-specific protein therapy is one of two special articles prepared for the Council on Pharmacy and Chemistry of the American Medical Association.[1] A foreword written by the secretary of the council states that: "A number of firms are advertising non-specific protein preparations under proprietary and sometimes meaningless names . . . No proprietary non-specific protein preparation has been accepted for inclusion in New and Nonofficial Remedies." Cecil concludes that it is extremely unlikely that these commercial products possess any virtues which are not equally inherent in typhoid vaccine, or the other agents commonly employed for non-specific therapy. In the process of reaching this conclusion, he has written a review which is well worth reading, and which contains much information that cannot be included in a brief notice such as this. As he remarks, the literature on the clinical application of foreign therapy is enormous, though it is for the most part inconclusive, for with the exception of Key's studies on experimental iritis in rabbits, there has been very little effort to test the value of foreign protein experimentally. In the field of arthritis alone the literature is so extensive that this author states that more articles have been written on the use of foreign protein therapy in the treatment of various rheumatic conditions than on any other medical subject. Most of these studies are quite uncontrolled, and very few clear and definite conclusions can be drawn from the very extensive literature. But whoever reads Cecil's article will at least realize the complexity of the problem, and will think carefully about the effect he wishes to produce by vaccine or foreign protein treatment.

Protein therapy was introduced to the medical world just about twenty years ago. Typhoid fever was the first infective disease in which this form of treatment was used. In 1913 Torres, a South American, reported successful results in the treatment of typhoid fever by giving typhoid vaccine intravenously and described the sharp sensations that followed its injection. Since then many forms of protein and protein derivatives have been used therapeutically in the treatment of acute, subacute and chronic diseases. In the realm of infective diseases protein therapy has met with general acceptance in the treatment of (*a*) infections of the eye; (*b*) acute and subacute pelvic conditions; (*c*) certain infections of the skin; (*d*) a few generalized infections, such as sepsis and typhoid fever; (*e*) acute and chronic forms of infectious arthritis; (*f*) cerebro-spinal syphilis, especially *dementia paralytica*. In the field of vascular disease, notably in *thrombo-angiitis obliterans*, foreign protein therapy also appears to have earned a secure therapeutic position. Many of these conditions are acute; indeed Cecil believes that foreign protein therapy finds its greatest usefulness in acute and subacute infections. The medical practitioner is more accustomed to think of foreign protein therapy in connexion with chronic conditions, but this author remarks that the earlier glowing reports on its achievements in various chronic diseases have not been widely corroborated. "It is significant", he writes, "that many of these rather startling claims have been made with regard to certain chronic infections, such as peptic ulcer, multiple sclerosis and chronic arthritis, which are characterized by periodic remissions and exacerbations."

What should be the place of this form of therapy in modern practice? The subcutaneous or intramuscular injection of vaccine or of proteins, such as milk, peptone, and the like, produces little or no reaction in the patient when given in reasonable doses. As a rule these injections do no harm, but often they fail to do any good. The benefit often seems to be in proportion to the amount of constitutional reaction and fever produced. Hence the use of intravenous protein therapy with some fever-producing substance like typhoid vaccine. Cecil discusses the justification of this rather drastic form of treatment and the conditions under which it should be used.

During the twenty years in which it has been in vogue, protein therapy has had its ups and downs, its defenders and detractors. It is less popular today than it was ten years ago, but the reactions that follow its use are better understood. That, at any rate, is the opinion of this author, but one wonders whether the reactions really are better understood when one reads his rather staggering list of the physiological changes that may take place in the body during the protein reaction. Following Hench he lists them as follows: (i) alterations in the basal metabolism; (ii) peripheral and splanchnic vasomotor changes; (iii) alterations in renal function detectable in the output and the acidity of the urine, and the concentration of nitrogen, phosphate urea, uric acid, allantoin and albumin; (iv) alterations in serum ferments and antibodies; (v) alterations in organic activity demonstrated by increase in

[1] "Non-Specific Protein Therapy", by Russell L. Cecil, M.D., *The Journal of the American Medical Association*, December 7, 1935; "Non-Specific Proteins: The Reactions to the Non-Specific Protein Treatment of Infectious Diseases", by Ludvis Hektor, M.D., *ibidem*, November 30, 1935.

various secretions and by changes in the activity of the liver, gastro-intestinal tract and spleen; (vi) alterations in volume, specific gravity, freezing point and viscosity of the blood; and (vii) alterations in its cellular and in its chemical constituents. This is indeed a formidable list and we are not surprised that Cecil admits that it is impossible to say which one or more of these physiological changes are responsible for the beneficial effects that often follow protein injections. Formerly it was assumed that the most important function of the foreign protein reaction was the mobilization of immune bodies in the circulating blood. Nowadays it is realized that there is little evidence to support the belief that a specific antigen-antibody mechanism is involved, even when stock and autogenous vaccines are used. The immediate reaction to foreign protein injections varies from an almost imperceptible one to extreme shock associated with high fever, profound vasomotor disturbance and other constitutional phenomena, and it is very generally assumed that the beneficial effect of the foreign protein reaction is due to the fever and that, up to a certain point, the higher the fever, the better the results obtained. There are some, however, who believe that the leucocytosis accompanying the reaction has important therapeutic value. Hench has remarked that foreign protein therapy may prove to be "specific" in a physiological if not in an immunological sense. It may produce a great many different kinds of specific reactions in the body. It is possible that some of these reactions are helpful in one disease, while others are helpful in another. In the treatment of peptic ulcer the specific effect desired is to keep the gastric acidity low. In *dementia paralytica* the fever is presumed to be the desirable part of the reaction. In vascular disease it is believed that some forms of protein therapy may produce a degree of vascular dilatation. In other infections it may be the leucocytosis or the mobilization of the specific immune bodies that produces the beneficial result. Foreign protein therapy has lost some of its prestige and popularity at the moment, but it is possible that the study of its physiological effects may result in a renewed and more skilful application of this form of treatment.

TUBERCULIN TESTS.

In testing for sensitivity to tuberculin many medical practitioners employ a control inoculation, in case the person tested should happen to be sensitive to the medium (glycerinated veal peptone broth) commonly used in the preparation of old tuberculin. Some observers have declared that there is a high incidence of localized skin reactions to glycerinated veal peptone broth; but within recent years it has been suggested that reaction in many cases is the result of contamination of the broth with tuberculin. It has been shown that old tuberculin adheres to apparatus with remarkable tenacity. Filter candles and glass instruments that had been used in the preparation of old tuberculin were found to be contaminated even after washing and sterilization by heat. Saline solution brought in contact with such instruments or apparatus produced skin reactions when injected into tuberculous guinea-pigs. Obviously, if a syringe that had been used for the injection of tuberculin was also used for the injection of glycerinated veal peptone broth as a control, or if the broth had been filtered through the same apparatus as old tuberculin, localized skin reactions might often be due, not to the broth itself, but to its contamination with tuberculin. If the broth causes reaction only through its content of tuberculin, its employment as a control substance is unnecessary and may even lead to confusion or to difficulty in assessing the value of a test. Furthermore, no syringe that has been employed for tuberculin testing should be used in any other tests (such, for example, as the Schick and Dick tests) for skin sensitivity. If, on the other hand, glycerinated veal peptone broth can itself be responsible for local reactions, it should invariably be used in tuberculin testing. Jules Freund and P. D'Arcy Hart have made a series of observations on the possible sensitivity of persons to glycerinated veal peptone broth and have drawn some interesting conclusions.[1] In a paper published in 1932 Hart reported that of 418 persons who did not react to an injection of 0·1 milligramme of old tuberculin, only one reacted to an injection of broth, and this one was later found to react to a dose of one milligramme of old tuberculin; on the other hand, 94% of 166 persons who reacted to old tuberculin also reacted to broth. Hart concluded that sensitivity to glycerinated veal peptone broth was constantly associated with sensitivity to tuberculin. This suggested the possibility that the broth contained tuberculous material, perhaps from infected meat, perhaps fortuitously introduced during preparation. In view of subsequent reports by other workers, Hart carried out a further series of experiments, using broth that had been prepared with special care in the avoidance of contamination with tuberculous material. In this series 39 of 52 persons reacted to old tuberculin, and of these, four reacted to broth; but the reaction to broth in each instance was much less pronounced than the reaction to tuberculin. Freund, working independently of Hart, obtained similar results.

Freund and Hart, working in collaboration, tested 72 patients with intradermal injections of old tuberculin and glycerinated veal peptone broth. Fifty-two patients reacted to tuberculin and ten to the broth. In some cases the reaction to broth was similar to a tuberculin reaction; in others it could readily be differentiated. One patient reacted to broth but not to tuberculin; but Freund and Hart remark that a small dose of tuberculin was used, and probably the administration of a larger dose would have elicited a reaction. In a further series of experiments 28 nurses were tested; of these, 23 reacted to tuberculin and three to the broth. One

[1] *The Quarterly Journal of Medicine*, October, 1935.

nurse reacted to broth, but not to tuberculin until the dose had been increased to ten milligrammes; as the reactions were then equal, Freund and Hart regard the reaction to tuberculin as non-specific in this instance. In every other instance the reaction to broth was less than the reaction to tuberculin.

As a result of their observations, Freund and Hart conclude that "the characteristic delayed persistent inflammatory skin reaction, reaching its height usually in two days", is a specific reaction to tuberculin. They disregard the transient urticarial or erythematous reactions that sometimes occur. They suggest that there is an association between skin sensitivity to glycerinated veal peptone broth and sensitivity to tuberculin, "and presumably, therefore, between sensitivity to broth and infection by the tubercle bacillus". They go on to state that, if their views are correct, the injection of broth as a control is unnecessary, providing tuberculin is not used in a larger dose than one milligramme. The results of their experiments also lend support to the belief that the earlier findings of a high incidence of sensitivity to broth were due to contamination with tuberculous material.

At first glance it seems remarkable that any person who reacts to broth should fail to react in a similar manner to tuberculin; but it must be remembered that tuberculin, as employed in the Mantoux test, is diluted. The observations of Freund and Hart tend to show that reaction to the broth contained in the tuberculin does not occur unless comparatively large quantities are injected. It would seem therefore that control injections in the Mantoux test are unnecessary. A useful confirmatory experiment would be the injection of a series of patients with glycerinated veal peptone broth in various dilutions. In the von Pirquet test, where undiluted tuberculin is used, it would be wiser at the present still to make a control inoculation.

THE EARLY DIAGNOSIS OF BRONCHIECTASIS.

The increasing interest in exact diagnosis of respiratory disease and in the technical equipment and operative skill of the bronchoscopist and the thoracic surgeon has focused a great deal of attention on bronchiectasis. It would appear, however, that comparatively little is known of the actual risk of this disease; in other words, its prognosis has not been accurately worked out. Certainly every doctor meets with cases of so-called chronic bronchitis in persons of comparatively advanced age, which are really instances of chronic bronchiectatic dilatation. But on the other hand the number of cases seen among young persons is very considerable, particularly if the practitioner is interested and well informed in the subject. What happens to these young subjects of an extremely intractable condition? Do they succumb to repeated bronchopneumonic attacks, or to hæmoptysis, or to abscess of the lung or of the brain? A statistical study pursued over a period of years is needed, but the subject may be attacked from another and more practical point of view. A carefully studied series of cases met with in routine work gives a fair cross-section of the hospital population suffering from the disease, with this exception, that the elderly patients who have the quiescent and relatively non-progressive type of disease probably do not seek advice so often.

J. T. Farrel has recently presented a useful series of 100 cases observed in Philadelphia.[1] Fifty-two patients were males and 48 females; 77 were under the age of 30 years, 22 being in the first decade of life, 28 in the second and 27 in the third. The preponderance of young patients will be noted; allowing for fallacies, surely this is significant. All the patients were studied radiologically, usually several times, and practically all were submitted to bronchoscopic examination. In about three-quarters of the cases iodized oil was instilled into the bronchial tree for the purpose of contrast radiography. One very interesting point is the site of involvement: it is frequently stated that it is useless to attempt treatment of bronchiectatics since their disease is always bilateral. No fewer than 41 of the patients had the left lung only involved, and in 23 the right lung only was affected; thus in a little more than one-third only was the disease bilateral. In half the cases the onset was blamed to some respiratory infection, in about one-quarter the cause was apparently one of the acute infections of childhood, and in the remaining quarter the cause could not be determined. Sinus disease, which has received recent notice in these pages, was found in over three-quarters of the cases; in one-quarter there was gross and extensive disease, in many of these cases amounting to a pansinusitis.

This study elicits no new facts, but it lays stress upon the frequency with which bronchiectasis begins in childhood or adolescence, its association with upper respiratory tract infection, and its unilateral situation in an encouraging number of cases. Farrel emphasizes the necessity for adequate radiological and bronchoscopic examination, for the diagnosis is not to be made lightly. He quotes the opinion of Flick that many of these young patients succumb to the complications comparatively early in life and that the undoubted immediate risk of surgical intervention may be found to be warranted on this account. Whether this view is too extreme or not the future will show, but treatment of bronchiectasis is not confined to major surgical procedures. Much more important for the general practitioner and more vital for the patient is the early recognition not only of bronchiectatic changes in the lungs, but of those infections of tonsils, adenoids and sinuses that may be its precursors, for on the eradication of these foci may depend the future health of the young patient's whole respiratory system.

[1] *The Journal of the American Medical Association*, January 11, 1936.

Abstracts from Current Medical Literature.

MEDICINE.

Free Diet in Diabetes.

Bernhard W. Ercklentz (*Deutsche Medizinische Wochenschrift*, November 29, 1935) records his experience over a period of two years in the treatment of diabetes with a diet chosen freely by the patient himself. He describes four cases in some detail. The condition of the first patient, a man of forty years, was unstabilized on fifty grammes of carbohydrate with insulin ranging from 70 to 120 units. He was asked what he would like to eat, and chose a diet of 2,600 calories containing 390 grammes of carbohydrate, 80 grammes of protein and 121 grammes of fat. His insulin was increased from 120 to 150 units. In the following days carbohydrate was increased to 494 grammes and insulin was reduced to 130 units. For ten days he took 473 to 500 grammes of carbohydrate with 130 to 150 units of insulin. He felt extraordinarily well and had a good appetite. He put on weight. His sugar excretion remained at from 6 to 11 grammes a day. At the end of the course carbohydrate had been gradually reduced to 150 grammes and the patient was taking 130 to 150 units of insulin. He had gained 14·4 kilograms (thirty-two pounds) in weight and had become bright mentally and physically. The second patient, a male, aged forty-one years, had a nine months' history. On a carbohydrate intake of 45 grammes he was excreting 142 grammes of sugar, his blood sugar figure was 416, and he had acidosis. His carbohydrate intake was raised abruptly to 400 grammes, with insulin 105 units, and the blood sugar was now 200. Later, on a diet containing 300 grammes of carbohydrate, the insulin required was 60, 40 and finally 30 units a day. The blood sugar fell to 125 and he had gained 12·6 kilograms (twenty-eight pounds) in weight. The third patient was a woman of fifty-seven years, with a diabetic sister. In three months she had lost 18·0 kilograms (forty pounds) in weight, and on admission to hospital was in precoma with 6·2% sugar in the urine and a blood sugar level of 570. Her carbohydrate intake was rapidly raised from 60 to 300 grammes and then to 400 grammes. The insulin dose was 100 units on admission, but never again, and eventually it was dispensed with. Glycosuria ceased entirely and the blood sugar dropped to normal. The fourth patient, a female, came into hospital with a blood sugar figure of 430, glycosuria and acetonuria. She had been taking 50 grammes of carbohydrate and excreting 80 grammes of sugar. Her carbohydrate was rapidly increased to 150 grammes and insulin to 70 units. On this there was no glycosuria, and presently the insulin was gradually reduced to nil without return of the glycosuria. Her blood sugar level remained at about 205. The other 100 patients behaved in almost the same way. Some of the older diabetics required strict dieting, presumably because in them the pancreas could not respond to the stimulus of increased carbohydrate. The following routine was adopted. Every diabetic admitted to hospital, if not comatose, was for the first two days given milk only, one litre *per diem* (carbohydrate 48 grammes, protein 32 grammes and fat 35 grammes = 672 calories). The result indicated whether the condition was severe or not. If the glycosuria disappeared and the blood sugar was low, insulin was dispensed with. Otherwise a mixed diet was given, containing carbohydrate 1·0 to 2·0 grammes and protein 1·0 to 1·5 grammes per kilogram of body weight, and not more than 70 grammes of fat. If a patient on this diet excreted sugar he was given insulin. For a daily excretion of 20 grammes of sugar the dose of insulin was 10 to 15 units three times a day, and more if necessary to abolish glycosuria. After some days of this "mixed diet" the patient was allowed to choose his own diet, keeping to the same amounts of protein and fat, but satisfying his craving for carbohydrate. Often he took 300 grammes of carbohydrate or more. With each increase of carbohydrate the insulin dose was adjusted, but as a rule the insulin did not have to be increased proportionately. After a while the craving for carbohydrate subsided and the patient voluntarily reduced the amount, usually to 150 to 250 grammes. Coincidently with this reduction of carbohydrate the insulin dose must be reduced or omitted altogether to avoid hypoglycæmia. The patient's condition was now considered to be stabilized and he was allowed to go, being given a leaflet instructing him as to diet, insulin injections, hypoglycæmic attacks, coma *et cetera*. The mental effect of this treatment was remarkable, especially in severe chronic diabetes. *Joie de vivre* and efficiency for the daily round were regained. It is suggested that actual regeneration of the islets is produced, and this suggestion is supported by the absence of relapses of patients on these high carbohydrate diets.

Diphtheria.

M. Gundel and J. Wustenburg (*Deutsche Medizinische Wochenschrift*, November 22, 1935) describe their experiences in regard to the occurrence of the Schick reaction after protective infection. They tested by the Schick test 5,051 children, of whom 3,813 had been "protected" and 1,238 had not been. The protected children gave 97·2% of negative results to the test, and the others 75·8%. Included in these were 1,059 children of Brandenburg, where no protective injections had been given. These gave 74% of negative results, and it was further observed that 467 of these children under nine years of age gave 66% of negative results, and the other 592, over nine years of age, gave 80% of negative results. An interval of from six to twelve months had elapsed between the protective injections and the Schick tests. For the protective injections "Formoltoxoid", "TAF", or "TA" had been used, and the respective efficiency of these and of one, two or three injections are compared. The thrice repeated injection gave a rather higher percentage of negative results. "Formoltoxoid" was used in 675 cases; 97·2% gave negative results to the Schick test; "TAF" was used in 2,084 cases with 96·9% negative results; and "TA" in 819 cases with 98·0% negative results. The authors record some examples of positive reactions to the Schick test in children who had had diphtheria within the preceding three years. Three of these had also had protective injections eight to ten months before the Schick test was made.

Tuberculous Infection and Disease.

Esmond R. Long (*Tubercle*, January, 1936) discusses the acquired and constitutional factors in resistance to tuberculosis and their bearing on the "reinfection" or adult type of the disease. It is generally accepted on *post mortem* evidence that a primary infection in most people confers an immunity that prevents subsequent infection altogether or keeps it from becoming progressive. In mortality curves there is a period, roughly of a decade, during which tuberculosis is very uncommon as a cause of death. The peak on one side represents deaths from the childhood type (primary infection) of disease; that on the other, those from the adult type (reinfection) of disease. The relative immunity, even in the presence of repeated opportunity for tuberculous infection, of children in the decade preceding adolescence is not yet understood. Either there is an unknown protective factor in operation during this period or the physiological processes of sexual maturation introduce some specific element of susceptibility. Girls mature first, and they show earlier and greater susceptibility than boys to the reinfection type of tuberculosis. In regard to acquired factors of resistance, history suggests that in all races in contact with the tubercle bacillus elimination of the more susceptible stock has occurred and there has resulted an adjustment between man and bacillus. As a result, modern environmental factors of crowding, exposure, malnutrition and other factors of strain in living are more responsible for present variations in susceptibility, at least in white races,

than constitution and heredity. Our present campaign of reduction in the spread of infection opposes the law of survival of the fittest. This tends also to postpone primary infections to adult years, but late primary infections, like early infections, are usually benign. If in the long run physiologically susceptible stock is preserved, we must presume that our advance in knowledge will enable us in the future to deal with this fact.

Occlusive Vascular Disease.

E. V. ALLEN AND G. E. BROWN (*The Journal of the American Medical Association*, December 21, 1935) discuss the value of intermittent pressure and suction in the treatment of occlusive vascular disease. Sixty patients were thus treated at the Mayo Clinic; 60 or 80 millimetres of negative and 20 millimetres of positive pressure were used. Some beneficial effect was noted in *thrombo-angiitis obliterans*, ischæmic neuritis, trophic pain, trophic ulcers and gangrene being relieved or improved in several patients. Intermittent claudication was not improved (three patients). The authors state that the results of treatment were not so good as those obtained by the intravenous injection of typhoid vaccine.

Electrocardiographic Studies.

C. M. KURTZ, J. H. BENNETT AND H. H. SHAPIRO (*The Journal of the American Medical Association*, February 8, 1936) record electrocardiographic studies on 109 patients during anæsthesia. Cyclopropane, ether, procaine, ethylene, nitrous oxide, vinyl ether, chloroform and tribrom ethanol in amylene hydrate were used as anæsthetics. Disturbances of rhythm were frequently observed; sinus arrythmia, extrasystoles, heart block and paroxysmal auricular fibrillation occurred, and on four occasions a rapid and totally irregular ventricular action, never recorded except under anæsthesia. Arrhythmia appeared more often in abnormal than in normal hearts. The lowest incidence of arrhythmias occurred with procaine, and the highest with chloroform. The arrhythmias were not related to the depth of anæsthesia. The irregular, rapid ventricular action occurred in all cases under cyclopropane anæsthesia. Variations of a transient nature occurred in the amplitude of *Q R S* complexes and *T* waves and in *S-T* and *P-R* intervals.

Scorbutic Arthropathy and Rheumatoid Arthritis.

JAMES F. RINEHART (*Annals of Internal Medicine*, December, 1935) has performed some experimental work in the production of joint changes in guinea-pigs fed on a diet deficient in vitamin *C*. After rather prolonged periods of time without this accessory food factor the first objective sign of the deficiency is an arthropathy which is characterized by pain, swelling and limitation of movement in multiple joints. An examination of the tissues at this stage shows that they are œdematous, with some degree of hæmorrhagic exudate. Microscopically, red blood cells and serum are found, spreading apart connective tissue cells; also broad hyaline streaks of a peculiarly packed fibrin are seen; later there is found proliferation of the connective tissue cells, the hæmorrhagic appearance subsides and an imperfectly vascularized and frequently œdematous granulation tissue thickening the capsule and obscuring the underlying tendons and bony prominences remains. A detailed account of the later stages of the scorbutic joint disability is given; the synovial proliferation with formation of pannus is a constant finding, while diffuse thinning of the articular cartilage and rarefaction of the bone ends in relation to the larger joints are frequently seen; there is some degree of muscular atrophy and degeneration and the connective tissue sheath about the tendons of insertion shows extravasations of blood, streaks of fibrin and tissue hyperplasia; the periarticular subcutaneous nodules are characterized by the irregular strands of brilliantly eosinophilic hyalinized fibrin throughout the œdematous cellular fibrous tissue. This arthritic change occurs in the absence of any demonstrable infection, but some infections have been found to accentuate and accelerate the pathological process. The description of the joint changes following deprivation of vitamin *C* follows very closely the pathological features of the rheumatoid type of arthritis. Features in common include: synovial proliferation and connective tissue pannus formation; connective tissue overgrowth in the capsular and periarticular tissues; retrogressive changes in the articular cartilage; general skeletal atrophy, most marked at bone ends; muscle atrophy and degeneration; finally, subcutaneous fibrous nodules are seen in both conditions, and those developing beneath the skin in the experimental animal are remarkably like the early nodule of the clinical disease. Various reports have appeared on the noted similarity of the joint changes of scurvy and rheumatism. Observations suggesting that the vitamin *C* requirement may be enhanced by achlorhydria would appear significant in view of the relatively high incidence of this factor in rheumatoid arthritis. The impaired peripheral circulation of rheumatoid arthritis would appear explainable on the basis of a vitamin *C* deficiency; the pathology of scurvy is dependent to a considerable extent upon the impairment of the capillary wall and attendant circulatory inadequacies. Many of the prodromal symptoms of rheumatoid arthritis are characteristic of latent scurvy. The clinical data of various observers is suggestive that persons suffering from rheumatoid arthritis have been taking a faulty diet for considerable periods, particularly as far as vitamin *C* is concerned. In some instances capillary resistance tests have shown low levels, and these have risen on the institution of a diet with a high vitamin *C* content.

Prostigmin in the Diagnosis of Myasthenia Gravis.

THE effect of prostigmin is so marked in cases of *myasthenia gravis* that Henry R. Viets and Robert S. Schwab (*New England Journal of Medicine*, December 26, 1935) have evolved a diagnostic test by the use of the drug. A subcutaneous injection of three cubic centimetres of prostigmin (Roche) and atropine, 0·6 milligramme (one one-hundredth of a grain) is given and the patient is put under close observation for the next three hours. The extraocular muscles and other muscles supplied by the cranial nerves are usually observed while the clinician is standing behind the head of the patient who is in the recumbent posture. His gait and attitude are observed from time to time during the test. Six separate examinations are done during the progress of the test, at ten, twenty and forty minutes and one, two and three hours after the injection. The following factors are noted: "subjective", relating to an increase in the feeling of well-being; "general", indicating a decrease in the paralysis of larger muscle groups; "local", indicating the findings in the smaller muscle groups, such as the extraocular muscles and those of the face and deglutition and speech. At each examination under these three headings the improvement is noted as being slight, moderate, marked and complete, and tabulated as one, two, three and four respectively. The "total" in cases of myasthenia as described by the writers ranged from 20 to 72. The "negative" cases tested gave totals of 2, 7, 6 and 4.

Pneumonia.

B. BURBANK AND E. ROTHSTEIN (*Annals of Clinical Medicine*, October, 1935) discuss the treatment of lobar pneumonia by artificial pneumothorax. Twenty patients were so treated with a mortality of 10%. Unilateral disease only was treated. Three hundred cubic centimetres of air were introduced on the day of admission to hospital, followed by 350 cubic centimetres six hours later and another 300 cubic centimetres on the following day. Pain was relieved, sleep was often induced, coughing was easier. The usual complications of pneumonia occurred: five patients became delirious, three requiring restraint; two empyemas were noted. There was no abdominal distension in any patient. Fifty cubic centimetres of a 50% solution of glucose were given intravenously every four hours for two to four injections in six patients when the systolic blood pressure fell below 100 millimetres of mercury.

Special Article.

MEDICAL PRIVILEGE.

By a Barrister-at-Law.

Communications between client and legal adviser are privileged by law, that is, need not be disclosed in court. Should communications between patient and medical adviser be similarly privileged? The question has given rise to one of the most interesting chapters of the law and has been answered differently in England, New Zealand and certain States of Australia. England's answer is "no"; New South Wales, Queensland, South Australia and Western Australia follow her; New Zealand, Victoria and Tasmania say "yes".

In England medical privilege, though non-existent, has long had its champions, from Bench as well as Bar, not to mention witness-box.

In 1792 Mr. Justice Buller said in Wilston *v.* Rastall (4 T.R. 753): "There are cases to which it is much to be lamented that the law of privilege is not extended: those in which medical persons are obliged to disclose the information which they acquire by attending in their professional characters."

In 1833 Lord Chancellor Brougham, in Greenough *v.* Gaskell (1 Myl. & K. 98), said that legal privilege was granted not on account of any particular importance which the law attributed to the business of legal professors, or any particular disposition to afford them protection, though certainly it might not be very easy to discover why a like privilege had been refused to others, and especially to medical advisers.

In 1846 Vice-Chancellor Knight-Bruce said in Pearce *v.* Pearce (1 De G. and S. 12): "And surely the meanness and the mischief of prying into a man's confidential communications with his legal adviser, the general evil of infusing reserve and dissimulation, uneasiness and suspicion and fear into those communications which must take place, and which, unless in a condition of perfect security, must take place uselessly or worse, are too great a price to pay for truth itself." The words were spoken, as appears, of legal privilege, but it is hard to see how they do not establish at least an equal need of medical privilege.

In 1896, Mr. Justice Hawkins, afterwards Lord Brampton, said in Kitson *v.* Playfair (1896, *The Times*, March 28): "I can quite understand a case, particularly in a civil cause, where a doctor is quite justified in refusing to divulge questions of professional secrecy . . . . The judge might in some cases refuse to commit a medical man for contempt in refusing to reveal confidences. Every case must be governed by particular circumstances and the ruling of the judge will be the test."

In Australia Sir Isaac Isaacs and Mr. Justice Higgins have declared themselves in favour of privilege being extended to medical men.

Sir Isaac Isaacs, then Mr. Justice Isaacs, said in National Mutual Life Association of Australasia Limited *v.* Godrich (10 C.L.R. 1): "I am not able to share the opinion of some learned judges that such a law is undesirable. If their reasoning is sound, then the privilege with which the law surrounds confidences between solicitor and client, between priest and penitent, should be similarly removed." He speaks of the "humanity" of some of the States of America that "led the way in this legislative reform".

Mr. Justice Higgins, in the same case, said that the Victorian section granting medical privilege, which will be described later, was, though probably requiring some amendment, "in the main just and expedient in the public interest".

The New Zealand *Evidence Act*, 1908, Section 8, reenacting a provision of earlier Acts, provides:

> (2) No physician or surgeon shall without the consent of his patient divulge in any civil proceeding (unless the sanity of the patient is the matter in dispute) any communication made to him in his professional character by such patient and necessary to enable him to prescribe or act for such patient.
>
> (3) Nothing in this section shall protect any communication made for any criminal purpose or prejudice the right to give in evidence any statement or representation at any time made to or by a physician or surgeon in or about the affecting by any person of an insurance upon the life of himself or any other person.

The Tasmanian *Evidence Act*, 1910, Section 96, is similar. These provisions have been the subject of interesting judicial interpretation.

In Godfrey *v.* Godfrey (6 N.Z.G.L.R. 289) a husband sought a divorce on the ground of adultery. He proposed to prove the adultery by calling a doctor who would testify that he had treated the wife for a miscarriage of a child of which the husband could not have been the father. Mr. Justice Edwards ruled that the evidence was inadmissible—it would be giving evidence without the consent of the patient of a "communication" within the meaning of the section. He also gave some advice to the medical profession. He observed to the doctor, who apparently was in the witness-box and had taken no objection, that, although medical practitioners could not expect to be conversant with the whole of the statute law of New Zealand, it was necessary that they should know the provisions of this statute, for the section forbade every medical practitioner to infringe it and cast on a medical practitioner called as a witness the onus of himself taking the objection, especially if the patient was not represented in court, and that the proper course for a medical practitioner to take, if questioned as to any such communication, was to decline to reply except under the direction of the court.

Stack *v.* Stack (25 N.Z.L.R. 209) was another divorce suit on the ground of adultery. The wife was the petitioner and the only evidence of adultery was an allegation that the husband had since marriage contracted venereal disease, of which the wife was free at the time. It was intended to prove this allegation by a doctor who would depose that he had examined the husband and found him suffering from the disease. Mr. Justice Denniston ruled that the tendering by a patient of any part of his person for examination with a view to medical treatment to a physician was a "communication" within the section. The evidence was accordingly inadmissible.

The section was more fully discussed in the important case Lucena *v.* National Mutual Life Association of Australasia Limited (31 N.Z.L.R. 481). A life insurance company was sued upon a policy. It refused to pay on the ground that the deceased had made a false statement in his application. The falsity of the statement was to be proved by doctors who had attended the deceased. The evidence was to consist of: (*a*) what the doctors saw in attending him, (*b*) what one doctor saw during an operation, (*c*) what a doctor told the deceased, (*d*) what the deceased told the doctor.

The court held that evidence (*a*) could be admitted because what the doctors saw could not be called a "communication". The word "communication" was used in its ordinary sense and so must be restricted to communications oral, written or by signs.

It followed that evidence (*b*) was admissible. "The operation and the information obtained in the course of it were not, in any fair sense, communications made by the patient necessary to enable the doctor to prescribe or act for the patient. I do not think that the mere fact that a patient submits his body to a doctor, to enable the doctor to ascertain what is the matter with him, is a communication within the meaning of the Act. If the patient tells the doctor what is the matter with him, that no doubt is a communication, or perhaps if the patient

without words points out to the doctor the part affected and it is patent without any further investigation what is the matter with the patient, that also would be a communication. A communication implies knowledge on the part of the person making it of the subject matter of the communication. If, however, the doctor on examining the patient finds out something of which the patient did not know, and the existence of which the doctor only discovered after investigation, that is not, in my opinion, a communication by the patient to the doctor contemplated by the Act. The cases decided in America upon a similar section show that the privilege given by the section has been used mainly for the purpose of defrauding life assurance companies, and there is no reason why the Court should encourage fraud by giving the section any wider meaning than its language has expressly marked out." Thus Mr. Justice Williams.

Evidence (*c*) was admissible because by the section it is not communications by a physician to a patient, but those of a patient to a physician that are privileged.

Evidence (*d*) was inadmissible.

The decision as to the submission of a person's body not being a "communication" conflicts, of course, with the ruling of Mr. Justice Denniston in Stack *v.* Stack (*supra*). Mr. Justice Denniston was also on the bench in Lucena's case. In this case he concurred with the judgement of Mr. Justice Williams and pointed out that his ruling in Stack *v.* Stack was "merely *obiter*", that is, not necessary to the decision.

Mr. Justice Edwards, whose judgement was given last, stated that he did not propose to dissent from any positive rule laid down by the judges who preceded him. He made perfectly clear, however, that his view was the direct opposite of that of his brother judges. "It is not easy to see what was the intent of the legislature in Section 8 (2) unless it was to so enact that a patient might consult a medical practitioner as to his ailments in the secure belief that the information which a medical practitioner necessarily acquired from his patient would be as sacred as the information which a legal practitioner acquires from his client. Assuming this to have been the intention of the legislature, I should have been driven to the conclusion that the word 'communication' was used in this enactment in a sense at least as wide as the primary meaning ascribed to it in Webster's Dictionary, where it is defined as 'the act or fact of communicating; as communication of small-pox; communication of a secret'. And I should have thought that the patient did communicate a fact to his medical adviser who submitted any portion of his body to that adviser for the purpose of enabling him to prescribe or act for his patient, and with the knowledge, or at least the hope or expectation, that the skill and training of that adviser would enable him, from what he saw, to draw a just conclusion of fact, and as a result of that conclusion to prescribe or act for his patient. I should have thought this, although none but a skilled medical man could draw any conclusion of fact from what the practitioner saw."

Later the judge delivers a trenchant denunciation of the section as interpreted by the court. "Whatever the object of the legislature, it is obvious that it has failed to use words of any practical value for the protection of the patient who consults a medical practitioner. On the other hand, it certainly has used words which, while of no practical value for the protection of the patient, may in some cases render it difficult to define the boundary between what is admissible in evidence and what is inadmissible. Thus, if this enactment ever proves to be of practical value to anyone, the person to profit is much more likely to be a member of the legal profession than anyone else." He concludes: "It may be worthy of the consideration of the legislature whether this branch of privilege, at all events, might not reasonably be extended much further."

The section was again considered in *In re* the St. Helens Hospital (32 N.Z.L.R. 682). In this case it was held that the privilege is not lost by the doctor repeating the communication to a nurse; in other words, the nurse could not give evidence of the communication without the consent of the patient. Such evidence would also be inadmissible as hearsay.

The Victorian *Evidence Act*, 1928, Section 28, is similar to the New Zealand Section 8 (2) and its Tasmanian equivalent, Section 96 (2). There is, however, an important difference. The words "any communication made to him in his professional character by such patient" are replaced by "any information which he has acquired in attending the patient". This provision has been in Victorian law since 1857 and it too has provoked interesting argument and interpretation.

In Warnecke *v.* The Equitable Life Assurance Society of the United States (1906 V.L.R. 482) the facts were similar to those in Lucena's case. A life insurance company refused to pay a claim upon a policy on the ground of false statement by the deceased, and sought to prove the falsity of the statement by what a doctor had found and told the deceased prior to his making the statement.

The company urged that "information acquired" must be read as meaning "communications made by the patient", that the proposed evidence was not of such a nature and was accordingly inadmissible. The contention was unsuccessful. The court held that the word "information" could not be so restricted, that it "comprises knowledge, howsoever acquired, whether from examination of or statements by the patient and that the privilege would be illusory if confined to his statements". The evidence was inadmissible.

The decision was reached, however, with much reluctance. Mr. Acting Chief Justice A'Beckett said: "Speaking for myself as to the effect of our decision, I think that the point successfully raised for the first time in this case gives new and dangerous effect to the section as an obstruction to the administration of justice." Mr. Justice Hodges took a similar view: "The wisdom of retaining this provision in its entirety seems to me to be doubtful. Many and strong reasons may be urged for preserving the inviolability of the priestly confessional, the sanctity of communications made under the marriage bond and the secrecy of instructions given to a legal adviser. Some reasons may exist for protecting communications to a medical adviser. But in judicial investigations, to exclude all the information acquired by the physician or surgeon, though acquired by his own eyes, or by his own fingers, or by the operation of his own mind, apart altogether from any communications made to him, seems to me to be placing an obstruction in the way of the investigation of truth, which has no, or at any rate an utterly inadequate, compensating advantage."

In National Mutual Life Association of Australasia *v.* Godrich (10 C.L.R. 1), another Victorian case, the decision in Warnecke's case was questioned by counsel, discussed and expressly approved by the High Court.

The facts were again similar. A claim upon a life policy had been refused on the ground of breach of warranty. Evidence was sought to be given of what the deceased said to a doctor and what the doctor discovered before, after and during an operation. The point that "information acquired" must be read as "communications made by the patient" was raised afresh, and the section was subjected to a searching examination.

Chief Justice Griffith was "reluctantly compelled" to the conclusion that he could not see any satisfactory grounds for limiting the section as requested.

Sir Isaac Isaacs made his view clear in a few words: "A patient in submitting his body for examination is presenting a human document as legible to the eye of medical science as is an instrument of title to the practised eye of a legal adviser, or any ordinary printed matter to a general reader. It is a much more distinct, complete and certain presentation of the actual facts of his condition than any verbal statement by him could possibly convey, and, without the most violent restriction of the ordinary and natural sense of the words 'information acquired', the suggested limitation is impossible."

Mr. Justice Higgins could find no reason for the limitation, and Mr. Justice Barton was unable to accept the argument. The latter was of the opinion that the legislature had protected the confidences of patients "to the degree necessary to render the protection real". He draws a vivid picture of the law as it was before the Act. "The mischief for which the common law did not provide was that confidences reposed by sick people in their medical men were not safe. Communications were only part of such confidences. No matter what the confidence was—howsoever intimate, and in whatsoever manner gained—he who held it was compellable to disclose it in the interests of justice. The range of confidence in matters of bodily health is much wider than in the case of the confessional. A penitent makes his confession by a narration of his sins. A patient, on the other hand, has not only symptoms to relate, but a body to lay bare as the source of his symptoms. There may be anguish long concealed, now first to be discovered by the doctor, or a drug-taking habit which for worlds he would not let anyone but the doctor trace to its cause; or he may have secreted in his room something which, without word spoken or sign made, will, when the doctor sees it, tell him that which he needs to know. The nature or position of a wound or lesion may be his innermost secret, but he must either exhibit it or remain ill and perhaps die. The fact that his medical man was bound to disclose to the world in open court, whenever so directed by the tribunal, every bit of information he had gained during professional attendance, could not but act as a deterrent, so as to cause patients in many cases to suffer agony and perhaps death rather than divulge facts inexorably kept secret. That dread, whether the fear of exposure and humiliation, or the recoil from the infliction of injury or grief on others, was the real 'mischief' which the common law did not provide against."

Coming to the argument that the administration of justice would suffer by the wider interpretation being taken, His Honour says: "In considering the range of the subject matter to be protected the legislature had to weigh in the balance the danger to life and health arising from the rigidity of the common law, against the loss of material testimony which must, often to the defeat of justice, result from its relaxation by statute. They have done this duty with the result, be it right or wrong in the main, that they have secured the safety of an immense range of confidences, and by doing so have necessarily impaired and in many cases prohibited the means of proof in a large class of forensic controversies. If by the expressions they have used they appear to some to have endangered the administration of justice, they will appear to others to have done a righteous and beneficent work in safeguarding within very wide bounds the confidence necessary to the frank disclosure of history and condition which alone can give sufferers the complete benefit of the skill of their chosen medical advisers." Mr. Justice Higgins observes that "no doubt the section is sometimes a hindrance to the establishment of the truth; but so are all the rules which fetter the giving of evidence".

The information privileged must, of course, be necessary for the doctor to prescribe or act for the patient.

"Necessary", says the Chief Justice, "must be construed in a wide sense so as to include any information which is, or is likely to be, relevant in determining the proper treatment of the patient, such, for instance, as his personal and in some cases, but not all, his family history; and it is not material whether the information given is actually followed by any treatment or not."

Mr. Justice O'Connor has some highly interesting observations on this aspect, particularly in regard to the information acquired by the doctor during the operation. "*Prima facie* nothing which the doctor himself observes during the operation is privileged from disclosure, the protection of the section extending only to the information necessary to enable the operation to be carried out. While it is being carried out the medical attendant is *prima facie* in the same position as any bystander of sufficient expert knowledge to understand and explain what he has seen. But that is true only when the operation in itself finally accomplishes the end at which the medical man is aiming. An operation, however, is sometimes undertaken, not with any hope of finally accomplishing the healing of the patient, but to obtain further knowledge. It may be an exploratory operation whose very purpose is to acquire information on which future treatment may be based. Everything observed by the doctor during such an operation which could afford the information necessary for the treatment of his patient would be protected from disclosure. Again, there may be cases in which the doctor determines that an operation is necessary, but cannot decide what particular action to take with respect to the part to be dealt with until he sees its actual condition. Under such circumstances the information which he so acquires, in so far as it affects the part of the body which he is treating, must be taken to be necessary for further action and so privileged from disclosure. Of this position the facts shadowed forth in the evidence tendered furnish an illustration. The evidence before the court as to Dr. Thring's treatment of his patient shows that he attended her for septic peritonitis. This is a condition which might arise from many different causes, and we may assume, I think, from the facts appearing in evidence, that the peritonitis followed the operation. The material question is: what course of treatment did the doctor follow in operating? If he performed the operation with the view of finding out the actual cause of the patient's condition and of dealing with the ovaries and Fallopian tubes by way of excision or otherwise in accordance with the state in which he found them, everything he saw of their condition would, it seems to me, be privileged from disclosure as being information necessary to enable him to decide upon the most judicious course of further treatment. On the other hand, if he had before the operation decided that the excision of those parts or either of them was the proper course of treatment, irrespective of the condition in which he might find them, his own observations as to their condition would not be necessary for the purpose of further treatment, and the information thereby acquired would be information not privileged from disclosure in court."

And what constitutes a "patient"? The Chief Justice: "I do not think that the mere fact that a physician or surgeon prescribes for or operates upon a human being necessarily constitutes that human being his patient within the meaning of the section. If that had been the intention of the legislature it could have been simply expressed by an enactment that 'no physician or surgeon shall divulge any information with regard to the health or condition of any person consulted or treated by him', words which are not in my opinion synonymous with those of Section 55 (now Section 28). In my opinion the words connote a period co-extensive with the continuance of the relation of personal confidence which may be assumed to exist between the physician and the patient. Whether that relation ever existed, or having existed still continues at any particular moment, is in every case a question of fact. In the case of a person who undergoes an operation at a public hospital, when the necessity and nature of the operation has been already decided upon, I do not think that the person operated upon is necessarily, within the meaning of the section, the patient of the surgeon who there saw him for the first time."

Mr. Justice O'Connor is of the opinion that it is not necessary that any confidential or contractual relation should be expressly created. "The mere fact of a doctor attending a person needing a doctor's care will in most cases be sufficient evidence of the relation of doctor and patient. But there may be cases in which the *prima facie* inference from that fact may be rebutted, as, for instance, where, in the case of litigation or anticipated litigation, the attendance is clearly for the purpose of obtaining information in the interest of someone other than the patient himself."

The court decided that the evidence could not be given, either because it was inadmissible or because, even if admissible, it could not be offered now, since it had not been properly raised at the trial and no substantial

wrong or miscarriage of justice had been thereby occasioned.

And so the matter of medical privilege rests today, as for so long it has rested, with judges holding opposite views and legal systems giving different answers. Yet none will disagree with the general principle enunciated by Vice-Chancellor Knight-Bruce in Pearce *v.* Pearce (*supra*): "The discovery and vindication and establishment of truth are main purposes certainly of the existence of courts of justice; still, for the obtaining of those objects, which, however valuable and important, cannot usefully be pursued without moderation, cannot be either usefully or creditably pursued unfairly or gained by unfair means, not every channel is or ought to be open to them . . . . Truth, like all other good things, may be loved unwisely—may be pursued too keenly—may cost too much."

British Medical Association News.

SCIENTIFIC.

A meeting of the Victorian Branch of the British Medical Association was held at the Medical Society Hall, East Melbourne, on March 4, 1936, Dr. Walter Summons, the President, in the chair.

The Psychological Aspects of General Medical Practice.

Dr. S. O. Cowen read a paper entitled "The Psychological Aspects of General Medical Practice" (see page 489).

Dr. H. F. Maudsley thanked Dr. Cowen for the very able presentation of his paper. Dr. Maudsley pointed out that although psychological symptoms, with or without physical illness, might be sufficiently obvious, it was not quite so well realized that the prevention of an established neurosis was often in the hands of the general practitioner; conversely, a latent neurosis might be precipitated by injudicious handling or by an unwise remark in the early stage of such a condition; this applied more especially to cases in which physical trauma had occurred. Dr. Maudsley quoted an extreme case of a man who sustained slight injury and felt pain in the left side of his chest. The patient asked his doctor whether his heart was damaged; the doctor, intending to be reassuring, made some joking reference to the patient's heart, which was immediately interpreted by the patient as an evasive answer to his question. He became convinced that his heart was seriously damaged and was frightened to move in case his death might be brought about; for six months he was bedridden, and it was only after many more months that he was reassured and was able to resume his normal life. Dr. Maudsley considered that psychological symptoms could be put into two extreme groups: at one end of the scale the patient was easily amenable to common-sense explanations so long as the practitioner took care to listen to the patient's story and to find out the content of his fear; at the other end of the scale was the patient who was not amenable to ordinary explanation and in whose case the difficulties of treatment appeared at first sight almost insurmountable. There were all grades between the two extremes, the former being an integral part of general medicine and surgical practice, the latter belonging to a specialized branch of medicine. To understand the motive lying behind the symptoms and behaviour reactions of the latter type of case an active unconscious mind had to be postulated. Dr. Maudsley hesitated to explain the neurosis on a purely psychoanalytical basis, though due regard had to be paid to Freudian theories as a help to the understanding of certain modes of reaction. Fear and conflict appeared to be the basis of most psychogenic disorders. Once fear became ingrained and conditioned, unconditioning was difficult of attainment. Dr. Maudsley did not altogether agree with Dr. Cowen's statement that prolonged physical investigations would reassure every patient if the reasons for such investigation were explained. In certain types of patients extensive physical investigations, especially if there was doubt in the physician's mind as to the origin of the patient's symptoms, might engender unreasonable fear and the patient's condition be made worse; it might be found that many of these patients would respond to ordinary psychological investigation. Doubtful septic foci should not be removed from this type of patient until some psychological investigation had been carried out. At a later stage such foci might be removed with benefit, but the danger was that the patient might come to expect that an operation was the appropriate cure for these symptoms. It might sound heretical to say that a search for a physical cause should not be the physician's first and foremost aim in every case of sickness, but a little judgement and some slight knowledge of psychological medicine should enable him to judge the type of patient with which he was dealing.

Dr. Maudsley agreed with Dr. Cowen that the terminology of medical psychology had become redundant and was confusing to the medical practitioner; on the other hand, it was impossible to talk of emotional responses and of behaviour in terms of neurology, so that medical practitioners had to acquaint themselves with some of the ordinary terms of psychology.

Pre-psychotic symptoms were often difficult to distinguish from the symptoms of a neurosis, and patients suffering from the former might purposefully hide the true contents of their thoughts so long as any insight remained. It was important to recognize mild states of manic-depressive psychosis, which were comparatively common, and the subjects of which might lead very unhappy lives through want of a proper understanding of their symptoms.

Dr. Maudsley agreed that the method of approach to a psychological case and the treatment depended largely on the outlook and personality of the physician.

Psychoanalysis was an unwieldy therapeutic weapon which was often harmful. A large number of patients could be reeducated and taught to rehabilitate themselves into normal life. Rest, under suitable conditions, with suitable occupational therapy, given at the right time, might be of great assistance.

The failure of the medical profession to realize the importance of psychological medicine might lead to the establishment of lay psychological clinics, which, he regretted to state, were receiving semi-official recognition in some quarters.

Dr. Maudsley referred to the teaching of psychological medicine; he stressed the importance of aiming at demonstrating how psychological symptoms might be recognized; the danger of wrong methods of handling should be pointed out to students without their being taught any special methods of treatment. For an intelligent understanding of the production of symptoms, lecture-demonstrations on psycho-pathology were essential.

Dr. Gerald Weigall congratulated Dr. Cowen on the choice of the subject and the way he had dealt with it. It was an address that should be seen by all students, to whom it would prove most valuable. The subject was becoming increasingly important, and Dr. Weigall had recognized this importance as he grew older, and had chosen the subject for his recent presidential address. When first he became qualified he had been inclined to diagnose either that some organic disease was present or that nothing was the matter, and he had omitted the enormous field of the functional disorders. These functional disorders arose from mental stress; speaking loosely, it seemed that so much nerve energy was absorbed by the operation of mental strain that there was not enough left for the normal functioning of the body. He distinguished between patients who were overworked and tired and required rest, and those who were indolent, introspective, idle and self-centred. The former would benefit by sleep and confinement to bed, but rest should not be ordered for the latter; they should be advised to undertake some

outside interest. The regulation of food and the recommendation of fasting on one day each week had proved of value in the treatment, which should be aimed at disciplining both the mind and the body. Dr. Weigall considered that alcohol should never be ordered for mental depression. If a spur was needed, the patient's job should be lightened. Golf and charity work, hobbies and religion, all had their uses in the treatment. The personality of the medical man was of the greatest importance; there was a right man for each patient. The examination of the patient should be thorough and scientific and impressive. Dr. Weigall had developed the habit of estimating the blood pressure and the colour index and of examining the urine of each patient. When the physician had made a diagnosis his attitude towards the patient should be one of certainty, but he should express a very real sympathy with the condition. He should insist on firmness and discipline of mind as well as of body. It was necessary to regulate the food and the habits, and especially the drink. Dr. Weigall considered that it was criminal to tell a patient that he had a weak heart and leave it at that. Even in the hopeless cases of malignant disease the patient could be given hope, in that there might be a faulty diagnosis. The physician could point out that the condition was no reproach to the patient, but called for courage and the setting of an example to his wife and family; even if he had to go out, he should do so with colours flying.

Dr. John F. Williams said that some of the neuroses were rather more deep-seated than would be gathered from the comments of Dr. Cowen and Dr. Maudsley. The motivation, though unconscious, might still be purposive. The neurosis fulfilled some requirement of the patient and seemed to the patient to be the best solution. The motivation had to be discovered by psychological methods, and the patient had to be convinced that the neurosis solution was not the best one. Dr. Williams referred to the omission of reference to the genito-urinary syndromes, some of which were regarded as anxiety states.

Dr. W. L. Carrington expressed astonishment that so much emphasis had been laid on the ætiological importance of inheritance and disposition. Surely the seeds were implanted in childhood to such an extent that these symptoms might almost be regarded as those of an infectious disease. Child hygiene was important in the prevention of the neuroses—escapes should not be excused. The author of a book called "The Problem Child" had since written a second, called "The Problem Parent", which, he explained, should have been the title of the earlier book.

The method of approach should be to point out that the patient was taking the wrong attitude to life and to suffering; he was lost, but he did not appear to know it; he had to be shown that he was off the track and should be guided back; he should be exhorted to use his qualities and be courageous.

It was of advantage to inculcate common-sense religion; psychology and religion could not be divorced; if modern psychology could postulate the scientific life, most of it could be found in the Sermon on the Mount.

Dr. R. R. Weitenhall expressed his appreciation of the remarks of the previous speakers, with special reference to Dr. Cowen. He thought that there were two ways in which he could contribute to the discussion. One was to refer to the psychological aspects of the practice of dermatology. Certain obstinate and inflammatory conditions of the skin were often associated with psychogenic forces. Many patients exhibited a fear of cancer, brought about by descriptions of cancer being due frequently to irritation; it would be found that they were suffering from pruritus. Other people stated that they had an organism on the skin, and might even produce alleged samples in a match-box. The other point that he wished to raise was concerned with the association of two learned professions. As a whole the medical profession had side-stepped the greatest issue of life. The doctors had not associated themselves sufficiently closely with those who were specially trained to study man's relationship with the unknown. Consultation over certain problems with members of the faculty of divinity would be found to be of great value and help to their patients.

Dr. T. G. Millar stated that psychological problems arose in rhinological clinics and practices in town. The common symptom was headache; persistent chronic headaches were rarely of nasal origin, though acute headaches were quite another matter. Another group of patients complained of nasal catarrh, and on investigation it was found that they were suffering from over-secretion of mucus in the nose. The hypersensitive state of the nasal mucous membrane was due to psychogenic causes. They focused their minds on the expectoration of an amount of mucus which would be of no account to a wharf-labourer or other sound person.

Dr. W. E. Jones expressed appreciation from the psychiatric corner of the audience. He drew attention to the neglect paid in the medical curriculum towards the teaching of psychology and psychological medicine. A start had been made, but it was not nearly enough, and should be seriously increased in the later stages of the curriculum. Dr. Cowen's paper should be taken to heart by all the members of the faculty.

Close association between the psychiatrist and the neurologist was essential. There was an association of general hospital staff with mental hospital staff in England; consultants were linked up and interchangeable. This advance should be copied in Australia. Dr. Jones pointed out that the differentiation between the psychotic patient and the neurotic was often difficult. The "brick wall" was typical of the psychotic, who would not talk about himself; it was different with the neurotic, who was very confiding. Dr. Jones would like a definite move to be made by the local branch of the British Medical Association to bring about an increase in the teaching of psychiatry and of medical psychology in the medical school at the Melbourne University. The family medical practitioner of a generation ago was the psychiatrist of the families he attended. He laid down a course of life and of treatment of the patient in a very definite manner; but now many doctors did not have the same intimate and familiar knowledge of the family life, because the patients visited them to a greater extent than formerly, and were liable to flit about from one doctor to another. As a result the subject had to be treated in some new way, and medical students should have a sound grounding in psychological medicine.

Dr. W. Ostermeyer read some remarks of Langdon Brown and of Mitchell Bruce, written before the close of last century, to show that normal psychology had not been overlooked then to the extent indicated by Dr. Cowen.

Dr. Summons, from the chair, expressed his appreciation of the paper and the discussion, and called on Dr. Cowen to reply.

Dr. Cowen said that even while he was reading his paper, and especially when the matter was referred to in the discussion, he felt that he stood corrected for having made a mistake by laying so much emphasis on the inborn defect. Dr. Maudsley appeared to have misunderstood him somewhat; he did not say that dealing with functional disorders was easy. The general medical worker got the larger proportion of good results by reasonably courageous and common-sense handling of the problems. The psychiatrist got the "snags", and it was only to be expected that he would get a correspondingly smaller proportion of good results.

Dr. Weigall had been entertaining and extraordinarily wise in his contribution to the discussion. Dr. Cowen quite agreed with his advocacy of occupational and outside interest in the treatment of the introspective type of patient. In reply to Dr. Jones, Dr. Cowen thought that there should be more formal instruction in the teaching of the handling of the neurotic, the physician's attitude of approach being conveyed to the students. This instruction might with advantage be given by an ordinary general physician, rather than by one in charge of a clinic in which there was a predominance of psychopathic patients.

NOMINATIONS AND ELECTIONS.

THE undermentioned has applied for election as a member of the New South Wales Branch of the British Medical Association:

Watson, Alexander Thurston, M.B., B.S., 1933 (Univ. Sydney), 10, Church Street, Canterbury.

Medical Societies.

THE VICTORIAN MEDICAL BENEVOLENT ASSOCIATION.

THE annual meeting of the Victorian Medical Benevolent Association was held on Tuesday, March 24, 1936, at 2, Collins Street, Melbourne.

Election of Office-Bearers.

The following officers were elected for the year:

President: Dr. R. H. Fetherston.

Vice-Presidents: Dr. J. P. Major and Dr. W. G. D. Upjohn.

Honorary Secretary: Dr. E. L. Gault.

Honorary Treasurer: Dr. L. Mitchell.

Committee: Dr. W. S. Newton, Dr. Fay Maclure, Dr. A. P. Derham and Dr. C. H. Dickson.

Financial Statements.

The audited balance sheet and the statement of receipts and expenditure were adopted. These showed the following assets:

Invested Funds	£8,369
Loan	30
Deposited in Banks	327
Total	£8,726

Balance Sheet.

RECEIPTS.	£	s.	d.	EXPENDITURE.	£	s.	d.
Interest	314	5	9	Relief	224	6	6
Subscriptions .	176	12	6	Sundry	4	16	0
				Surplus	251	18	9
	£480	18	3		£480	18	3

Annual Report.

The following annual report was adopted.

The Committee again gratefully acknowledges the continued support of the Association by a large majority of the members of the Victorian Branch of the British Medical Association. This has enabled it to make substantial grants to two medical men who have been placed in dire straits owing to serious and continued ill-health, terminating in the death of one of them.

In addition to these, grants have been continued to the widows of two medical men, one of whom died recently at an advanced age.

A grant of £3 a week was made to a highly respected medical man during his last illness to enable him to obtain much-needed nursing attendance.

It is hoped that, as the work of the Association becomes more widely known, no case of real need will be allowed to exist without reference to the Committee.

Correspondence.

CEREBRO-SPINAL FLUID TESTS IN SYPHILIS.

SIR: My attention was attracted in particular to one paragraph in the very interesting paper on "Recent Progress in the Art and Science of Medicine", by Dr. L. J. Jarvis Nye, which appeared in THE MEDICAL JOURNAL OF AUSTRALIA of March 14, namely, that headed "Syphilis". The writer refers to many "lives ruined by neuro-syphilis", and he adds: "no treatment should be considered adequate unless in addition to giving normal responses to blood tests the patient has a cerebro-spinal fluid which has been pronounced normal both as regards cell count and response to Wassermann and Kline tests. In the light of modern knowledge it should be considered a criminal offence to discharge a luetic patient as cured unless this precaution has been taken."

May I endorse this sentence with all the emphasis possible. It is not always sufficiently realized that the "antibody" content of the blood and that of the cerebro-spinal fluid are often quite different and that in treated cases of syphilis where the blood Wassermann reaction has been rendered negative by intensive treatment, the cerebro-spinal fluid, if tested, will in a considerable percentage of cases still give a strong positive reaction.

These cases in which the blood Wassermann reaction is negative and the cerebro-spinal fluid reaction is strongly positive are extremely interesting. Kolmer, with a very wide experience, states that "in about 15 to 25 per cent. of cases of syphilis in which treatment is given and negative blood serum reactions are observed within the first eighteen months after infection, the spinal fluid reactions will be found positive and an indication for further specific treatment". Further: "There is no reliable clinical substitute for spinal fluid examination, as such cases may present absolutely no neurological signs or symptoms, not even papillary changes."[1]

The cerebro-spinal fluid is tested not only for its complement-fixing properties, but also for the number and kind of cells and for its protein content. The combination of positive Wassermann, increase in number of cells, and excess of albumin in the cerebro-spinal fluid can be taken as differentiating cases of neuro-syphilis from those in which the Wassermann reaction alone is due to a non-nervous syphilitic infection. In cases which are clearing up under treatment the cell count and albumin content are often the last indices to become normal.

With the remarkably successful treatment of neuro-syphilitic cases by means of malarial and heat therapy, it appears all the more desirable to discover incipient or potential neuro-syphilis cases at the earliest possible moment and apply heat therapy in one or other form before serious damage has been done to the central nervous system. Whether this form of treatment be used or not, there can be no question that specific treatment should be continued until the cerebro-spinal fluid test, equally with the serum test, has become negative. As to the choice of serological methods for determining syphilitic infection, the practice in this laboratory is to use the Wassermann test (Harrison-Wyler technique) and the Kahn flocculation test for routine diagnosis, but for the control of treatment and test of cure to employ the Vernes flocculation test with Wassermann and Kahn as confirmatory methods.[2] The graphs furnished by a series of Vernes tests present a decisive verdict in support of the contention that the cerebro-spinal fluid should be tested before discharging a patient, and show clearly, as in Dr. Farran-Ridge's series of cases,[3] the remarkable effect of malarial therapy in the treatment of both potential and active neuro-syphilis.

A point of some practical importance is that opportunity for doing lumbar puncture, and some accommodation for patients after this procedure, is an essential part of the equipment of any venereal disease clinic, whether State or hospital or private, and it is a serious matter

that in many of these institutions such facilities are not available. As to the responsibility of the medical practitioner concerned, I do not wish to vary the verdict given by Dr. Jarvis Nye.

Yours, etc.,

HAROLD A. WOODRUFF.

Bacteriology Department,
University of Melbourne.
March 18, 1936.

References.

(1) J. A. Kolmer: "Chemotherapy, with Special Reference to the Treatment of Syphilis", page 530.
(2) H. A. Woodruff: "The Vernes' Test as Applied in the Diagnosis and Treatment of Syphilis and Tuberculosis", THE MEDICAL JOURNAL OF AUSTRALIA, February 28, 1931, page 247.
(3) C. Farran-Ridge: "Malarial Therapy and the Serological Reactions of Neuro-Syphilis", THE MEDICAL JOURNAL OF AUSTRALIA, October 12, 1935, page 480.

THE PSYCHOLOGICAL ASPECT OF GENERAL MEDICAL PRACTICE.

SIR: As one who is keenly interested in the mental hygiene movement and its progress, I wish to add my meed of praise to the appreciation expressed of the value and conciseness of Dr. Cowen's paper read before the general practitioners' meeting in Melbourne recently. Such papers are most welcome.

I agree with him when he said that a good deal of harm had been done by the publication in the lay Press and so-called "popular doctor's books", especially by irresponsible persons, of medical subjects. This may cause in the mind of the uninformed public a morbid fear of imaginary disease; but I am greatly in favour of enlightening the public and educating them in every branch pertaining to mental hygiene. Moreover, I am convinced that until we get the community at large to be mental hygiene minded we will see in our clinics, hospitals and allied institutions the number of neurotics and mental cases increasing, as well as witness the growth of a discontented and anti-social population.

Although the old family physician type is rapidly vanishing, which is from some angles perhaps a pity, the general practitioner who has taken his place should play an important part in the prevention of mental as well as bodily disease. Hence the importance of knowing the signs and symptoms of mental defects and disorders at the earliest possible moment, in infancy, childhood and adolescence. The necessity of the teaching of psychiatry and psychology to the practitioner and the medical student is growing more and more evident. Psychology can no longer be confined to the study of hospital types of mental disease, but must be considered as an inclusive part of medical studies of all types and degrees of maladjustment.

Referring to heredity, mentioned by one of the speakers as a decisive factor operating in the mental sphere, were we to exclude all conditions of mental deficiency in which there is a defect of nerve structure, such as undeveloped brain or other organic disturbances which are really physiological and usually hereditary, many symptoms and characteristics would be proven to be caused by environmental conditions, most frequently during the most tender years. Indeed modern investigators lead us to believe that few, if any, psychoneuroses and defects of character are inherited. What we do inherit from our progenitors is the raw material and tools by means of which we have to fashion the said material. We may use, abuse or neglect it; the environmental conditions are the real decisive factors.

As to the attitude of the physician to the neurotic patient, I cannot agree with some of the speakers' stated methods. A certain measure of personal superiority necessarily arises from the fact that the patient comes to the physician for advice and help; but against this superiority he will soon revolt, wait for the first weak point which the authority may expose, and shatter it.

I consider that one of the most important elements in psychotherapy is the establishment at the first interview of a bond of sympathy and understanding between patient and physician, by means of which he is usually successful in receiving from the patient that advance in confidence which is really necessary. I do not favour the sphinx-like attitude of the Freudians, but am convinced that the god-like attitude so dear to the old school is the less likely to succeed. It is noteworthy when dealing with "neurotics" to find that most of them are really intelligent, often brilliantly so, and no wonder when one considers that we are dealing with an individual whose mental business is in a state of embarrassment verging on bankruptcy. Surely a mental deficient's business is not likely to be in embarrassment or in bankruptcy! Just as the beggar cannot be a bankrupt (since he possesses little or nothing), so the mental deficient has never had assets capable of involving him in embarrassment or bankruptcy.

The neurotic's business is to "be suspicious". If you do not succeed in gaining his confidence you are not likely to effect a cure.

Regarding the teaching of psychiatry, I am in full accord with most of the speakers. Only a few years ago all psychiatry was practised inside mental hospitals after shipwreck had taken place. Now the tendency is for the vast bulk of psychiatric treatment to be done outside the hospitals, not by specialists alone, but by the general practitioner and family physician, who is in daily contact with the patient, whose maladjustments to life, minor nervous ailments, infelicities, inefficiencies and psychological and psychologically produced aches and pains bring them to the doctor for health. The majority of them he could and should benefit; here and there will be an exceptional case which must be referred to a specialist, just as in other branches of medicine and surgery. Minor psychiatry, like minor surgery, the general practitioner can and must attend. Some day, I hope not far distant, it will be as heinous for a family doctor to neglect a case of melancholia or anxiety neurosis as it is now for him to neglect a case of appendicitis, iritis or glaucoma.

Yours, etc.,

M. A. SCHALIT.

141, Wellington Street,
Windsor,
Victoria,
March 24, 1936.

DIFFICULT CHILDREN.

SIR: I was very pleased indeed to see the letter by Dr. S. Minogue in the journal of March 28, because I think it is quite time that the medical profession took its part in this discussion. Dr. Minogue refers very pertinently to the effect of psychological upbringing upon children whose parents can afford such management and have the time and knowledge to apply it.

He does not, however, refer to a very much wider aspect of the same question, which appears to have also been overlooked by most advocates of modern child training, but is everywhere apparent to general practitioners. I refer to the effect upon the average working and middle class family of being told that children should never be punished for wrong-doing, because there are far better methods of correcting the fault. There may be, but the average parent does not know them, and so the child is allowed its own sweet will and becomes a plague to its parents and all around it, and the result when it grows up is far from desirable. The people should be gradually taught the newer methods without being emphatically told that the old methods are wrong until they have been adequately replaced. By gradual evolution only we shall produce a better race of children. The present revolutionary tendency will only delay such a result and ruin the lives of many children who would otherwise become good and happy citizens.

Some three or four years ago I was called by a man to see his daughter, aged twelve. Upon arrival I found the house in a state of chaos. The mother had gone out, taking the younger child with her, "because she couldn't stand it". Pictures were pulled down from the wall, broken crockery was everywhere, tables and chairs were upset. The child had been "expressing herself" because her father would not let her have her way. When I remonstrated with her, she said she would not be bossed by her father. And when I was talking to her father she flung a tin of pepper in our faces. I suggested to her father that a spanking seemed indicated, and he said: "But, doctor, isn't it wrong to punish a child." I told him there were exceptions and he then administered the treatment in a very mild form. The child gave in at once and went to bed when she was told. It had to be repeated about three weeks later, and since then she has been a decent and well-behaved child, whereas before she was a constant source of trouble and anxiety to her parents. This, of course, was an extreme case, but it illustrates the effect of a smattering of modern psychological training upon an average working class family.

Another case was that of a young mother who came to me very distressed because she had smacked her daughter, aged five, for calling her a "dirty mongrel". I reassured her that she had not done the child any irreparable injury, and probably far more good than by allowing the incident to pass. By studying a book on child psychology she would probably be able to prevent a recurrence of the incident, but, if she failed, to take the same action again. She went away happy with her book, and the daughter, who was a very nice and likeable child, did not seem in the least "suppressed".

Yours, etc.,

GIFFORD CROLL.

Sherwood,
Brisbane,
March 30, 1936.

SIR: To dissect sentence by sentence the letter by Dr. Minogue (THE MEDICAL JOURNAL OF AUSTRALIA, March 28, 1936, page 449) and to rebut the assertions airily made therein would be an interesting but not very difficult exercise. More important, however, than the subject of this letter is the defeatist, destructive attitude towards psychology that the tone of the letter conveys. This is especially deplorable as, representing as it does the attitude of so many New South Wales psychiatrists, it attacks the whole foundation of psychopathology, which rests on psychology as pathology is dependent upon physiology. Man is a biopsychic organism, and only when both aspects of that unity are adequately investigated can we advance to a complete understanding of a patient's personality and symptoms.

Modern psychology (as distinguished from what is termed academic psychology) is a young science and must be expected to suffer from growing pains. Dr. Minogue, in his youthful impatience, possibly has expected more obvious results than such a science is yet able to give.

Merely to decry the value of psychological methods in child training, and with the only alternative advised a return to the good (?) old days, must make the average practitioner come to the conclusion that child guidance clinics, industrial psychology *et cetera* are so much waste of time. As G. K. Chesterton says: "Modern intelligence will not accept anything on authority, but it will accept anything without authority."

Yours, etc.,

A. T. EDWARDS.

Mental Hospital,
Morisset,
New South Wales,
March 31, 1936.

SIR: To those interested in psychiatric work the past few issues of THE MEDICAL JOURNAL OF AUSTRALIA have provided food for thought. First came the articles of Dr. Coupland Winn, which formed a satisfactory review of Freudian dogma and a confession of faith therein. Unfortunately, as is usual, he had to admit the impractical nature of the therapeutics which result, for the patients who can afford the time and money for an hour five or six days a week for three years are few and far between, and even six months is impossible for the majority.

His prophecy of the time to come, "when so-called normal children will receive this boon" of child analysis may be partially fulfilled in the further development of nursery schools, for there is no doubt that many problems of behaviour yield to the companionship of other children, with the unobtrusive guidance of a trained nursery school helper. One hopes, however, that the forced sexual interpretations of play, such as one finds in Melanie Klein's book, will not be universally adopted.

Possibly this prophecy was partly responsible for your editorial on difficult children, as well as the letters from Professor Osborne and Dr. McGeorge. The former seems to need comment from a rather different viewpoint of Dr. Minogue (March 28).

The evils of meddlesome interference may certainly be marked, but in many cases judicious advice to the parents of a "problem child", with alteration of the environment in which the child lives, by the addition of playmates, play material *et cetera*, and the avoidance of disturbing factors, may do more to make the child healthy and happy than the *régime* of the good old days, with thrashing *et cetera*, advocated by Dr. Minogue. It is even possible that "many leaders of the professions, including bishops and archbishops," may have been better balanced men with less thrashings and what now seem to be more common-sense methods of handling children. After all, the child guidance clinic cannot be held responsible for the "only child" and the problem remains as to how this unfortunate can be partially freed from his handicap.

Professor Osborne's outburst against Dr. Winn's articles seems also to deserve comment, for, much as one regrets the necessity for "recent German resentment and action" against "eroticism in sculpture, painting, fiction and drama", this intrustion cannot with fairness be laid as a charge against psychoanalysis. With all due deference to his knowledge of the East and its literature, there is no doubt as to the importance of sexual factors in causing many maladjustments even in this "Nordic" community. Moreover, to dismiss the statement that "the majority of illnesses are psychological in origin" as "balderdash" does not go far in proving or disproving its truth.

To return to your editorial again, may one comment on the fact that the public's enthusiasm for child psychology is not necessarily irrational, for surely the hope of the future lies with a more satisfactory childhood?

If the medical profession is not to be fitted to give sound advice to the anxious parent, but to fall back on the dear old myth that the child will grow out of it at seven or at fourteen, then the task will be taken up by others, without our supposedly better balance and breadth of view. The attack on intelligence testing is justified if, as often happens, too great a reliance is placed on a numerical coefficient, but mental tests are nevertheless of considerable value in giving advice as to present adjustment and education, and to some extent as regarding possible future careers, if they are backed up by clinical judgement and experience.

Last, but not least, we come to Professor Dawson's able summary of the last twenty-five years' progress in psychiatry, and it is surely such a well balanced outlook that the profession should strive to attain, rather than that of the former articles and correspondence commented upon.

Yours, etc.,

JOHN F. WILLIAMS,
Honorary Psychiatrist to Children's Hospital, Melbourne; Honorary Psychiatrist to Saint Vincent's Hospital, Melbourne.

12, Collins Street,
Melbourne,
April 2, 1936.

Books Received.

LECTURES IN DISEASES OF CHILDREN, by Robert Hutchison, M.D., LL.D., F.R.C.P.; Seventh Edition; 1936. London: Edward Arnold and Company. Medium 8vo, pp. 460, with illustrations. Price: 21s. net.

THE MINOR MEDICINE OF GENERAL PRACTICE, by L. V. Snowman, M.A., M.B., M.R.C.P.; 1936. London: John Bale, Sons and Danielsson. Foolscap 8vo, pp. 110. Price: 2s. 6d. net.

LEAGUE OF NATIONS: QUARTERLY BULLETIN OF THE HEALTH ORGANISATION; December, 1935. Geneva: The Publications Department of the League of Nations. Price: 2s. 6d. net.

Diary for the Month.

APR. 14.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
APR. 14.—Tasmanian Branch, B.M.A.: Branch.
APR. 15.—Western Australian Branch, B.M.A.: Branch.
APR. 21.—New South Wales Branch, B.M.A.: Ethics Committee.
APR. 21.—Tasmanian Branch, B.M.A.: Council.
APR. 22.—Victorian Branch, B.M.A.: Council.
APR. 23.—New South Wales Branch, B.M.A.: Clinical Meeting.
APR. 24.—Queensland Branch, B.M.A.: Council.
APR. 28.—New South Wales Branch, B.M.A.: Medical Politics Committee.
APR. 30.—South Australian Branch, B.M.A.: Branch.
APR. 30.—New South Wales Branch, B.M.A.: Branch.
MAY 1.—Queensland Branch, B.M.A.: Branch.
MAY 4.—New South Wales Branch, B.M.A.: Organization and Science Committee.

Medical Appointments.

Dr. M. H. Harper has been appointed a Member of the Hospitals Commission of New South Wales.

* * *

Dr. L. C. Holland and Dr. W. H. Baudinet have been appointed Resident Medical Officers at the Adelaide Hospital, South Australia.

* * *

Dr. L. W. Jeffries has been appointed Acting Inspector-General of Hospitals, Acting Chairman, Adelaide Hospital Board, and Acting Chairman, Nurses' Registration Board in the Inspector-General of Hospitals Department, South Australia.

* * *

Dr. T. a'B. Travers and Dr. E. L. Gault, in pursuance of the provisions of the *Opticians' Registration Act*, 1935, have been appointed Members of the Opticians' Registration Board, Victoria.

* * *

Dr. A. W. Morris has been appointed Government Medical Officer at Marburg, Queensland.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser", pages xviii, xix. and xx.

BUNDABERG HOSPITAL, BUNDABERG, QUEENSLAND: Assistant Resident Medical Officer.
CHILDREN'S HOSPITAL, CARLTON, VICTORIA: Medical Officers.
MACKAY HOSPITALS BOARD, MACKAY, QUEENSLAND: Resident Medical Officer.
MATER MISERICORDIÆ HOSPITAL, WARATAH, NEW SOUTH WALES: Resident Medical Officer.
PARRAMATTA DISTRICT HOSPITAL, PARRAMATTA, NEW SOUTH WALES: Junior Resident Medical Officer.
THE BRISBANE AND SOUTH COAST HOSPITALS BOARD, QUEENSLAND: Honorary In-Patient Surgeon

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCHES.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 135, Macquarie Street, Sydney.	Australian Natives' Association. Ashfield and District United Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham United Friendly Societies' Dispensary. Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney. North Sydney Friendly Societies' Dispensary Limited. People's Prudential Assurance Company Limited. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association, Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Brisbane Associate Friendly Societies' Medical Institute. Chillagoe Hospital. Richmond District Hospital, North Queensland. Members accepting LODGE appointment and those desiring to accept appointments to any COUNTRY Hospital, are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	All Lodge appointments in South Australia. All Contract Practice Appointments in South Australia.
WESTERN AUSTRALIAN: Honorary Secretary, 205, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (Wellington Division): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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